Stage 1 State Significant Development Application
Environmental Impact Statement

Redevelopment of Harbourside Shopping Centre

Submitted to NSW Department of Planning and Environment
On Behalf of Mirvac Projects Pty Ltd (Mirvac)

November 2016 ▪ 14657

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fjmt

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- QS Statement
- Landowners Consent

Statement of Validity

Environmental Impact Statement prepared by	
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Qualifications	BTP MPIA / BPLAN (Hons) GradDipEnvMgt MPIA
Address	173 Sussex Street, Sydney
In respect of	State Significant Development Application for redevelopment of Harbourside Shopping Centre, Darling Harbour
State Significant Development Application	
Applicant name	Mirvac Projects Pty Ltd
Applicant address	Level 28, 200 George Street, Sydney, NSW, 2000
Land to be developed	Harbourside Shopping Centre, Darling Harbour
Proposed development	Stage 1 / Concept Proposal for the redevelopment of Harbourside Shopping Centre
Environmental Impact Statement	An Environmental Impact Statement (EIS) is attached.
Certification	I certify that I have prepared the content of this EIS and to the best of my knowledge: ▪ It is in accordance with Part 4 of the *Environmental Planning and Assessment Act 1979* and Schedule 2 of the *Environmental Planning and Assessment Regulation 2000*. ▪ It contains all available information that is relevant to the environmental assessment of the development to which the statement relates. ▪ The information contained within this statement is neither false nor misleading.
Signature	
Name	Belinda Thomas / Brendan Hoskins
Date	15/11/2016

Executive Summary

This Environmental Impact Statement (EIS) relates to a Concept Proposal for the redevelopment of the Harbourside Shopping Centre site within Darling Harbour, and is submitted to the Minister for Planning and Environment pursuant to Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act), and *State Environmental Planning Policy State and Regional Development 2011* (SEPP SRD). The proponent is Mirvac Projects Pty Ltd.

An initial request to issue Secretary's Environmental Assessment Requirements (SEARs) for the environmental assessment of the Harbourside Project was made on 6 November 2015 and SEARs were first issued on 9 December 2015. Since the issue of these initial SEARs, and following extensive community consultation, the form and content of the project has evolved. As such, an amended SEARs request was made on 20 June 2016 and amended SEARs were provided on 30 August 2016.

The Site

The Harbourside Site occupies an area of approximately 2.05 hectares within the north western portion of the Darling Harbour precinct. The Site is generally bound by Pyrmont Bridge to the north, the ICC Sydney site to the south, Darling Drive and the alignment of the light rail to the west and Cockle Bay to the east.

Consultation

Key stakeholders including local residents, surrounding landowners, government agencies, public authorities and the City of Sydney Council have been consulted during the preparation of the EIS. Details of this consultation are provided at Section 3.0 of this EIS.

A key result of the consultation process was the refinement of the Concept Proposal from a podium and commercial tower design to podium and residential tower design. The refinement of the Concept Proposal (shown below), was a direct result of feedback from surrounding land uses, in particular residential uses to the west of the Site. The extensive pre-lodgement consultation process undertaken by Mirvac has resulted in a balanced development outcome, with potential impacts minimised and a well-considered proposal sought.

Original Commercial Tower Option

Revised Residential Tower Option

The Proposed Development

The Harbourside Concept Proposal establishes the vision and planning and development framework which will be the basis for the consent authority to assess future development proposals within the Site. It articulates what the proponent is seeking to achieve for future development and sets the broad parameters for the development of the site.

The Harbourside Site is to be redeveloped for a mix of residential and non-residential uses, including a new retail shopping centre, residential apartment tower and substantial public domain improvements.

Key features of the Concept Proposal for the Harbourside development include:

- in-principle demolition of existing site improvements, including the Harbourside Shopping Centre, the southern pedestrian bridge link across Darling Drive, obsolete monorail infrastructure, and associated tree removal;
- concept for a network of open space areas and pedestrian links generally as shown within the Public Domain Concept Proposal, to facilitate re-integration of the site into the wider urban context;
- building envelopes;
- land uses across the Site, including non-residential and residential uses;
- a maximum total Gross Floor Area (GFA) of 87,000m^2 for the future mixed use development (comprising both non-residential and residential floor space);
- basement parking;
- car parking rates;
- Urban Design and Public Realm Guidelines to guide future development of the built form and the public domain;
- a framework for achieving design excellence; and
- strategies for remediation, a strategy utilities and services provision, managing drainage and flooding, and achieving ecological sustainable development.

A detailed description of the proposed development is contained in Section 4.0 of this EIS and illustrated in the Concept Proposal Design Report (including Architectural Drawings) prepared by Francis Jones Morehen Thorp Architects (fjmt) and provided at **Appendix A**.

Planning Context

The proposed Harbourside development has a total Capital Investment Value (CIV) of over $10 million and is therefore classified as SSD pursuant to Schedule 1 of the SEPP SRD.

The Site is located in the Darling Harbour precinct, which is identified as a State Significant Site in Schedule 2 of *State Environmental Planning Policy (State and Regional Development) 2011*.

Section 5.0 of the EIS considers all applicable legislation in detail. Overall, it has been determined that the proposal complies with all relevant planning controls.

Darling Harbour Development Plan No 1 (DHDP) is the principal environmental planning instrument applying to the Site. Under Schedule 6 Part 7 clause 23(1) of the EP&A Act, the DHDP is taken to be a regional environmental plan. By operation of Schedule 6, Part 21 and Clause 15 of the *Environmental Planning and Assessment Regulation 2000*, Regional Environmental Plans are deemed to be State Environmental Planning Policies (SEPPs). The principal aim of the DHDP is to define the type of development which may be permitted within the Darling Harbour Development Area. Uses permissible on the Site are broad and include development for the purposes of tourist, educational, recreation, entertainment, cultural or commercial facilities, car parking stations, film television and radio stations, hotels, parks and gardens, residential buildings, serviced apartments, shops, refreshment rooms and utility installations. There are no maximum building heights or GFA restrictions imposed by DHDP, and no other detailed controls or provisions that guide or restrict the form of development on the Site.

Environmental Impacts

This EIS provides an assessment of the environmental impacts of the project in accordance with the SEARs and sets out the undertakings made by Mirvac to manage and minimise potential impacts arising from the development (refer to Section 5.0). Key potential impacts identified include, amongst others:

- visual and view impact;
- overshadowing to adjacent development;
- traffic generation, car parking requirements, and road and pedestrian safety;
- impacts to items of heritage significance;
- impacts to archaeology;
- construction noise and vibration;
- impacts to existing services and infrastructure;
- waste generation;
- flooding; and
- remediation of existing contamination.

All identified impacts are addressed in this EIS and are capable of being ameliorated through the implementation of appropriate mitigation measures as outlined in Section 6.0.

Conclusion

The compilation of mitigation measures has been prepared to inform the ongoing management of the Harbourside Site throughout the detailed design, construction phase and operational phase of the retail and residential building and public domain. This EIS fulfils the requirements of the *Environmental Planning and Assessment Act 1979* and addresses the project specific SEARs, and demonstrates that the impacts of the proposal can be satisfactorily managed. In light of the above, and the significant benefits of the proposed development, we therefore recommend that the proposed development be approved.

1.0 Introduction

This Environmental Impact Statement (EIS) is submitted to the NSW Department of Planning and Environment (the Department) in support of a staged State Significant Development (SSD) application[1] for a Concept Proposal relating to the redevelopment of the Harbourside Shopping Centre Site (Harbourside), in Darling Harbour.

Mirvac Projects Pty Ltd (Mirvac) is seeking to secure approval for a Stage 1 Concept Proposal that includes details for the redevelopment of Harbourside; including a new retail shopping centre, a residential tower and substantial public domain improvements.

The project supports the realisation of the NSW State Government's vision for an expanded 'cultural ribbon' spanning from Barangaroo, around to Darling Harbour and Pyrmont. Furthermore, the project will importantly add further renewed diversity in tourism and entertainment facilities to reinforce Sydney's CBD being Australia's pre-eminent tourist destination.

The Harbourside Site is located within the Darling Harbour precinct which is identified as a State Significant Site in Schedule 2 of *State Environmental Planning Policy (State and Regional Development) 2011*. As the proposed development will have a capital investment value of more than $10 million it is declared to be State Significant Development (SSD) for the purposes of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

This EIS has been prepared by JBA on behalf of Mirvac and is based on the Concept Proposal Design Report (including Architectural Drawings) prepared by Francis Jones Morehen Thorp Architects (fjmt) and other supporting technical information appended to the report (see Table of Contents).

This report describes the site, its environs and the proposed development, and provides an assessment of the proposal in terms of the matters for consideration under Section 79C(1) of the EP&A Act.

This EIS has been prepared in accordance with the requirements of Part 4 of the EP&A Act, Schedule 2 of the *Environmental Planning and Assessment Regulation 2000* (EP&A Regulation), and the Requirements of the Secretary of the Department of Planning and Environment for the preparation of the EIS, which are included at **Appendix B**.

A concurrent process is currently being undertaken with Property NSW in regards to facilitating the project through commercial agreements relating to land ownership/leasing. Additionally, direct benefits of the proposal will include enhancements related to public domain upgrades; pedestrian connections; new publicly accessible spaces; affordable housing contributions; enhancements to the Pyrmont Bridge; new public viewing opportunities; and built form upgrades.

[1] *A staged development application is commonly referred to as a 'Stage 1 Development Application' a 'Master Plan' or 'Concept Proposal' throughout this EIS.*

1.1 Overview of Proposed Development

The proposal relates to a staged development application (in accordance with Section 83B of the EP&A Act) and seeks to set out a Concept Proposal for the Harbourside Site which is located within the north western side of the Darling Harbour precinct.

The Concept Proposal establishes the vision and planning and development framework which will be the basis for the consent authority to assess future detailed development proposals.

The Harbourside Site is to be developed for a mix of non-residential and residential uses, including retail tenancies and restaurants, residential apartments, and open space.

The Stage 1 Concept Proposal seeks approval for the following key components and development parameters:

- in-principle demolition of existing site improvements, including the Harbourside Shopping Centre, the southern pedestrian bridge link across Darling Drive, obsolete monorail infrastructure, and associated tree removal;
- concept for a network of open space areas and pedestrian links generally as shown within the Public Domain Concept Proposal, to facilitate re-integration of the site into the wider urban context;
- building envelopes;
- land uses across the Site, including non-residential and residential uses;
- a maximum total Gross Floor Area (GFA) of 87,000m^2 for the future mixed use development (comprising both non-residential and residential floor space);
- basement parking;
- car parking rates;
- Urban Design and Public Realm Guidelines to guide future development of the built form and the public domain;
- a framework for achieving design excellence; and
- strategies for remediation, a strategy utilities and services provision, managing drainage and flooding, and achieving ecological sustainable development.

1.2 Background to the Proposal

Mirvac acquired Harbourside, a key location within the Darling Harbour precinct, in November 2013. Harbourside, which was opened in 1988 as part of the Bicentennial Program, has played a key role to the success of Darling Harbour as Australia's premier gathering and entertainment precinct.

Despite its success, with an annual pedestrian visitation of around 13 million people, Harbourside is now outdated and in decline. The building lacks a quality interface to the Darling Harbour public domain and Cockle Bay and does not integrate well with the major transformation projects underway and planned for across Darling Harbour (discussed further below).

Harbourside is at risk of being left behind and undermining the significant investment being made in Darling Harbour that will see it return to the world stage as a destination for events, entertainment and tourism.

Prior to Mirvac obtaining Harbourside, the NSW State Government reviewed the Site as an option to be part of the SICEEP development, primarily due to the isolated nature of the Site and Harbourside not being up to modern standards as a key retail shopping centre for Darling Harbour. The NSW State Government did not obtain the site as part of the SICEEP development due to the timing and staging of the projects, however, there was a general acknowledgement and consensus that the Site requires redevelopment.

Accordingly, Mirvac have taken a carefully considered and staged approach to the complete revitalisation of the Site and its surrounds. Mirvac have tested various designs, tower locations and land uses in order to fit in with the surrounding and future development and to create a world class retail and entertainment centre to meet the needs of tourists and Sydneysiders alike and be supported by an iconic residential tower above to complement the surrounding uses of Darling Harbour.

1.3 Objectives of the Proposal

The objectives for the Harbourside Concept Proposal include:

- to develop Harbourside and Darling Harbour into one of Sydney's most innovative tourism, retailing and entertainment districts;
- supply 52,000m^2 of quality retail floor space including food and beverage offerings and retail tenancies to ensure Darling Harbour becomes a destination shopping, dining, tourist and entertainment location;
- deliver 35,000m^2 of residential floor space, contributing choice and variety of apartments in the locality;
- accelerate housing supply by delivering additional apartments on the fringe of the Sydney CBD where there is high demand for new apartments;
- provide a range of apartment types and sizes to cater to the changing population of Sydney and varying market demands;
- deliver a large number of new homes in a location closer to employment opportunities;
- create building envelopes that will facilitate a design that can be constructed in a staged manner;
- establish a framework for achieving design excellence;
- provide the opportunity to create a quality visitor experience and establish Harbourside as a distinctive destination within a revitalised retail and residential quarter of the City;
- enable opportunities to increase and improve connections with Pyrmont and the City;
- provide opportunities for public activity and enterprise within Darling Harbour to provide a catalyst for future growth and expansion in the locality;
- repair the urban fabric of this part of the city by encouraging the restoration of street grain and connectivity; and
- increase and improve pedestrian and cycle connectivity across the Site and into the CBD from the western quarters of the city.

1.4 Analysis of Alternatives

1.4.1 Strategic need for the proposal

The NSW State Government in 2011 recognised that the entertainment, exhibition and convention facilities within Darling Harbour needed to be rejuvenated and upgraded due to the increasing competition from similar facilities within the Asia-Pacific region. The Sydney International Convention, Exhibition and Entertainment Precinct (SICEEP) development within Darling Harbour is currently under construction and seeks to ensure Sydney can accommodate world class interactive exhibitions and conferences in flexible spaces that are better suited to modern needs.

The Harbourside Site remains the last piece of the puzzle which needs to be reinvigorated to serve the needs of visitors to the precinct and provide high quality residential accommodation in close proximity to transport, employment, services and the new facilities which have been the focus of the rejuvenation of Darling Harbour.

Accordingly, new facilities on the Harbourside Site are required from a strategic perspective that will provide:

- for a contemporary shopping and dining experience that will enable the site and broader Darling Harbour precinct to be competitive with other facilities nationally and globally;
- a modern building which is designed and constructed in line with international best practice;
- appropriate supporting uses, such as residential apartments, to underpin the redevelopment of the Site; and
- longevity as an internationally relevant shopping, dining and tourist destination.

Harbourside is a key component of the overall redevelopment of Darling Harbour. The Concept Proposal will rejuvenate an underutilised area of the city, and will provide a framework for future development that both respects the existing urban fabric surrounding the Harbourside Site and respond to future developments proposed in the locality.

1.4.2 Alternative Option – Do Nothing

The 'do nothing' option would result in the current retail facilities within the Harbourside Shopping Centre at Darling Harbour remaining unchanged and requiring ongoing maintenance. The existing Harbourside building was constructed in 1988 when the Darling Harbour precinct was undergoing an extensive program of urban renewal. Approaching 28 years of age, the Site and building are now in need of regeneration.

Under the option of 'do nothing', the existing shopping centre would remain in its current tired state, providing little benefit to the Darling Harbour precinct which has received significant investment in previous years (billions of dollars). Whilst there will be some ongoing benefits of the existing shopping centre in providing retail and dining services, the opportunities of the Site will not be maximised and with time, there is likely to be enhancements made to services within other locations to satisfy the demands of the ICC facilities that seek to make Darling Harbour a world-class location.

Sydney's, and more importantly, Darling Harbour's appeal as a suitable venue for shopping, dining, entertainment and tourism would continue to diminish with the do nothing option. This option would overall be to the detriment of the locality and the wider NSW and Australian economy.

The current public domain within, and in the immediate vicinity of, the Harbourside Site would also be retained in its current state, with no chance for upgrades to stitch the tired and dated public domain into the revitalised ICC Sydney development. Significant public domain upgrades have occurred as a result of the ICC Sydney development, whilst no upgrades have occurred to the Harbourside Site. Doing nothing on the Site would highlight the disconnect of the Harbourside Site in the revitalisation of Darling Harbour.
If this option of doing nothing was selected, the significant benefits in creating a new retail and residential precinct on an underutilised Site on the periphery of the CBD would not materialise.

1.4.3 Alternative Option – Shopping Centre Refurbishment

Refurbishment of the existing shopping centre and facilities is an available option given the current uses are permissible with consent on the Site and there is an acknowledgement that the existing shopping centre is in need of rejuvenation.

Whilst an available option, the refurbishment of the existing shopping centre in isolation would not capitalise on the opportunities available to the Site. The comprehensive redevelopment of the Harbourside Site is a once in a lifetime opportunity to provide a high quality development on the edge of Sydney's CBD, stitching together the fabric of Australia's premier tourism and entertainment precinct.

A redevelopment focused purely on the refurbishment of the shopping centre would result in an underutilisation of such a prominent Site. The landscape of Darling Harbour, and more widely the western edge of Sydney's CBD, is evolving, with the fulfilment of development potential on many sites around Sydney's waterfront land. Limiting the development potential on this prominent Site would reduce the overall development capacity of Sydney and would hinder the successfulness of the Darling Harbour precinct in the long term.

Furthermore, in order to achieve the highest quality refurbishment of the existing shopping centre and accompanying public domain improvements, significant investment would be required.

In light of the above considerations, this option has not been selected.

1.4.4 Alternative Option – New Shopping Centre and Development Above

With a general understanding that the existing Harbourside shopping centre is in need of rejuvenation, and in acknowledgement that a simple refurbishment is not a viable option, the next alternative option is the redevelopment of the existing shopping centre with new development above. There is a myriad of options for new development above a redeveloped shopping centre, all of which Mirvac and the project team have tirelessly worked through to resolve the most appropriate redevelopment.

The development of a new shopping centre could be commenced as one of two options, being redevelopment to the existing height and extent, or expanding the current retail offering in a podium building. Mirvac and the project team considered both of these options in depth.

A redevelopment of the existing building to a building of a similar size would pose a number of issues, including:

- insufficient floor to ceiling heights, with the shopping centre unable to match international examples of high end shopping centres which provide generous floor to ceiling heights;
- limitations in the ability to respond to key surrounding developments and important features, such as the ICC, ICC Hotel and Pyrmont Bridge;
- poor public domain interfaces with changing setbacks to Cockle Bay resulting in varying public domain experiences; and
- restriction on the quantum of non-residential floor space which could be delivered, limiting the vibrancy on the Site and potential stifling more diversity in retail, restaurant and entertainment offerings.

On the other hand, a redeveloped podium which capitalised on the opportunities of the Site could deliver the following benefits:

- opportunities to shape the podium to respond to key surrounding developments and features, enabling increased separation to enhance view sharing;
- ability to provide new pedestrian connections, enhancing east-west links between Darling Harbour and Pyrmont;
- a publicly accessible rooftop space which maximises views over Cockle Bay and allows the general public to share the benefits of additional height;
- new event spaces at the ground plane, encouraging a merging of public and semi-public spaces to prioritise pedestrians and maximise activity along the Darling Harbour waterfront;
- ability to provide a more regular setback to the waterfront, better integrating the public domain around the future podium with the remainder of the Darling Harbour precinct; and
- additional retailing, restaurant, bar and other associated non-residential uses which will contribute to Darling Harbour as a key tourist and entertainment precinct on the world-stage.

In light of the above benefits, a podium redevelopment which reimagines the existing shopping centre scale is preferred by Mirvac. With this in mind, Mirvac has consulted key surrounding uses, including the ICC Sydney and ICC Sydney Hotel. Consultation with these surrounding users has resulted in refinements to the southern podium envelope, with a stepped form allowing for view sharing to be maximised and for the new ICC facilities to be better appreciated (refer to **Figure 1**).

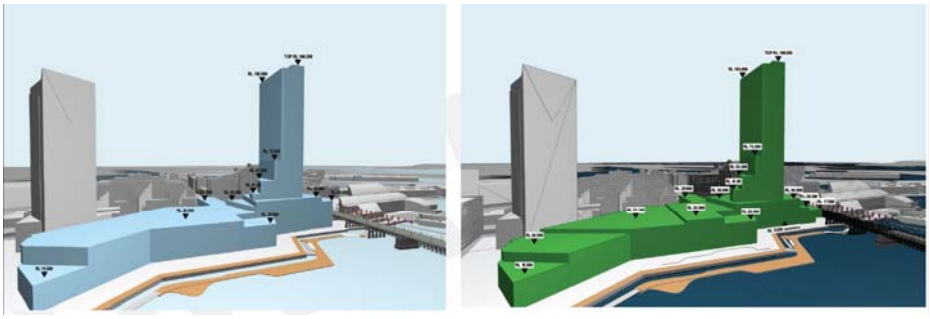


Figure 1 – Evolution of podium envelope resulting from consultation (blue = June 2016 / green = September 2016)
Source: fjmt

Furthermore, expert design and heritage advice has resulted in the northern envelope being setback further from the Pyrmont Bridge when compared to the existing situation. This increased setback will allow for improved pedestrian connectivity, as well as an enhanced ability to appreciate the significance of Pyrmont Bridge.

With the resolution of the podium design, the next stage in the analysis of alternatives process was the resolution of the development above. The resolution of the relevant options for development above has occurred in two phases. The initial phase involved Mirvac and the project team reviewing potential development opportunities above a reimagined shopping centre. This process comprised the review of a range of different building typologies and land uses. The second phase then involved Mirvac and the project team engaging with key stakeholders to refine the new development above the centre, namely identifying the most appropriate building form and corresponding land use.

The key steps within these processes, and the range of design options considered by the team, are explored in detail below and in the Design Report prepared by fjmt (refer to **Appendix A**).

Phase One – Exploration of Building Typologies and Land Use

Land Use

In identifying the future mix of land uses in additional to the new retail shopping centre, Mirvac undertook an in-depth analysis of appropriate uses considering a number of factors, such as permissibility, market demands and site characteristics. Two primary land uses which were explored included commercial office space and residential apartments.

The first key consideration in assessing these uses was the permissibility of each land use under the Darling Harbour Development Control Plan No. 1. Under this instrument, both land uses are permissible with consent. As such, either use was considered to be viable.

The next consideration was market demands. Mirvac undertook a detailed analysis of the demand for both residential and commercial uses within the Darling Harbour locality. The outcome of this analysis was that demand for either use is high given the characteristics of the locality being on the edge of Sydney's CBD.

When reviewing the site characteristics in more detail, it was identified that either use would be suitable given the mixed use nature of Darling Harbour and the positive locational attributes of the Harbourside Site. In weighing up the benefits of both the residential or commercial land use options, Mirvac determined that a commercial land use would be pursued given the opportunities this could pose in long term ownership.

Built Form

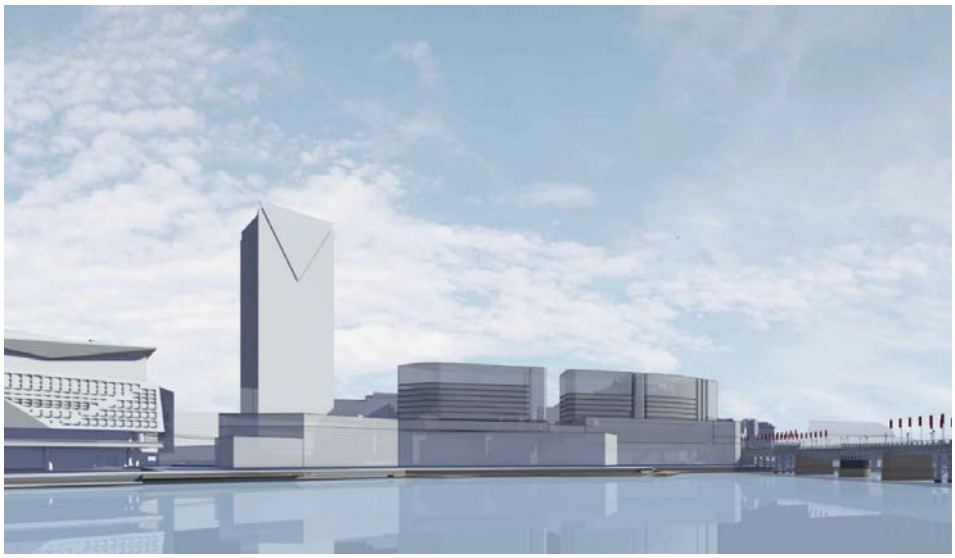
With a decision made on the complementary land use for the project, Mirvac and the project team commenced the exercise of identifying an appropriate built form outcome. The design team primarily considered two (2) alternative scenarios for the Harbourside redevelopment during the preparation of the Concept Proposal. These options comprised:

- podium + two towers; and
- podium + one tower.

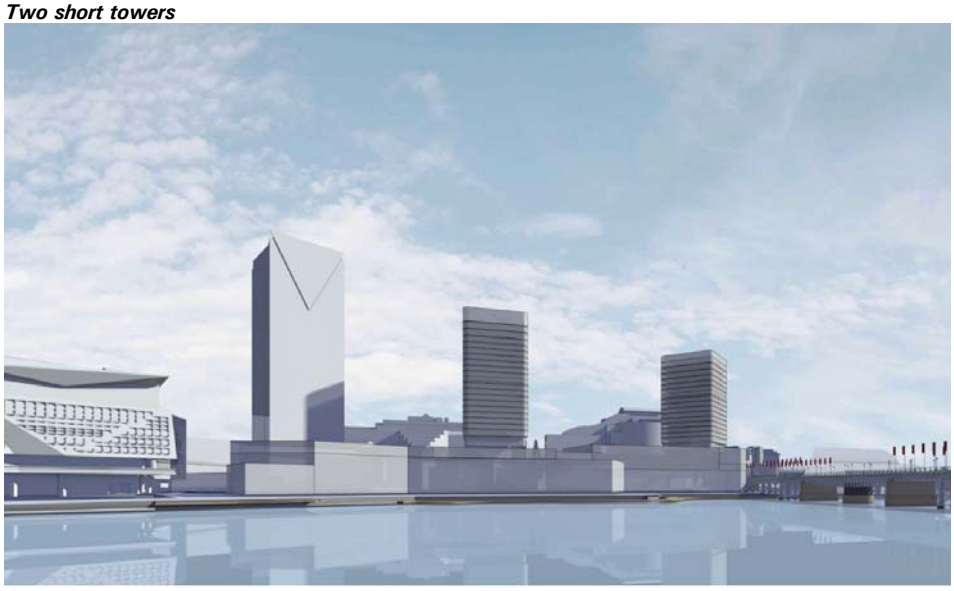
A brief summary of the alternative options and outline explaining why they were not adopted is provided below.

Podium + Two Towers

The first option considered by the design team was two towers above the podium shopping centre building. Two sub-options were considered, being two short towers, and two taller towers. Each sub-option would yield a similar commercial GFA, meeting project objectives by harnessing the potential of the Site. **Figure 2** illustrates both options.



Two short towers



Two tall towers

Figure 2 – Two tower redevelopment options
Source: fjmt

The benefits of these options included:

- large floor plates for commercial uses (shorter option);
- minimised overshadowing of Cockle Bay water (shorter option);
- visual impacts on the skyline limited due to two smaller tower (both options); and
- ability for multiple entries (both options).

Despite these benefits, the options of two towers, whether short or taller towers, were considered to have negative attributes which resulting in impacts to surrounding uses. These negative attributes included:

- reduced opportunities for view sharing due to increased site coverage;
- greater potential overshadowing implications for existing development to the west;
- reduced building separation internally within the Site and to the ICC Hotel to the south;
- limited opportunities for accessible roof terrace on podium rooftop;
- slow moving shadows cast across the public domain adjoining the waterfront;
- potential creation of a more urban wall of buildings on the western edge of Darling Harbour.
- limited options for attaining quality views;
- disjointed servicing and loading requirements due to multiple buildings;
- inefficient circulation within future buildings due to multiple cores; and
- restrictions on the central Bunn Street pedestrian connection (shorter option).

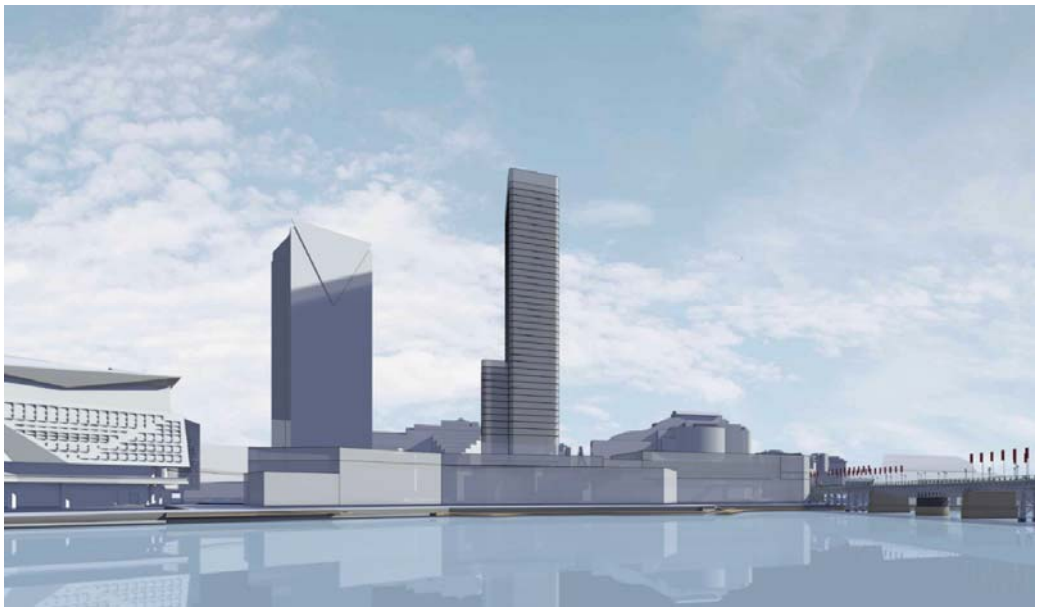
In light of the above, both of these options were discounted.

Podium + One Tower

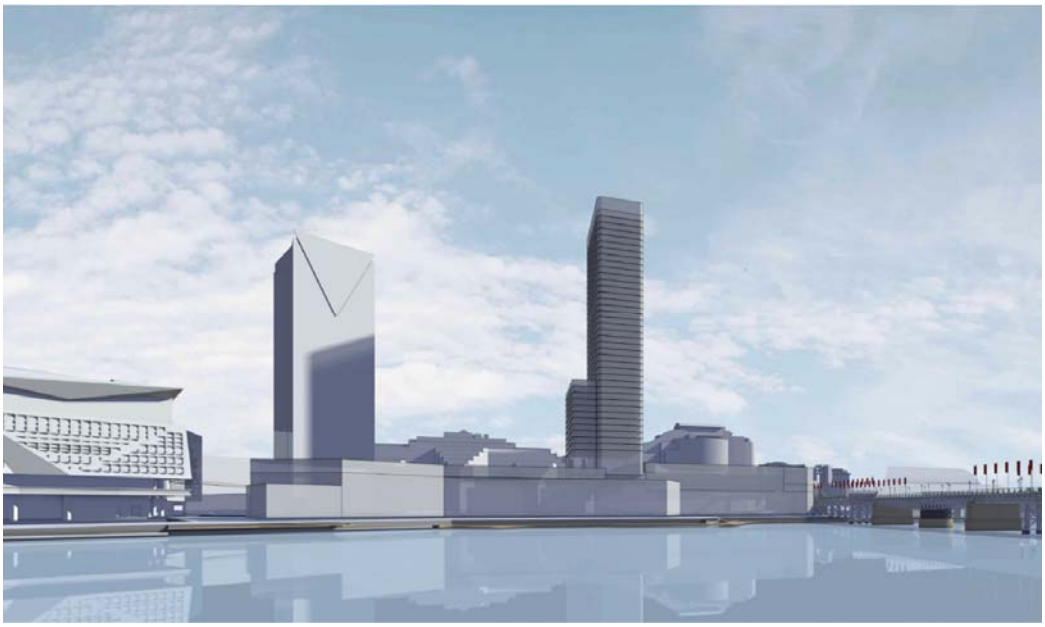
With the discount of the two tower option, the next option examined was the provision of a single commercial tower above the podium shopping centre building. Similar to the previous option considered, the single tower option contained three sub-options, being:

- southern tower – positioned at the southern end of the podium;
- central tower – positioned in the centre of the podium; and
- northern tower – positioned at the northern end of the podium.

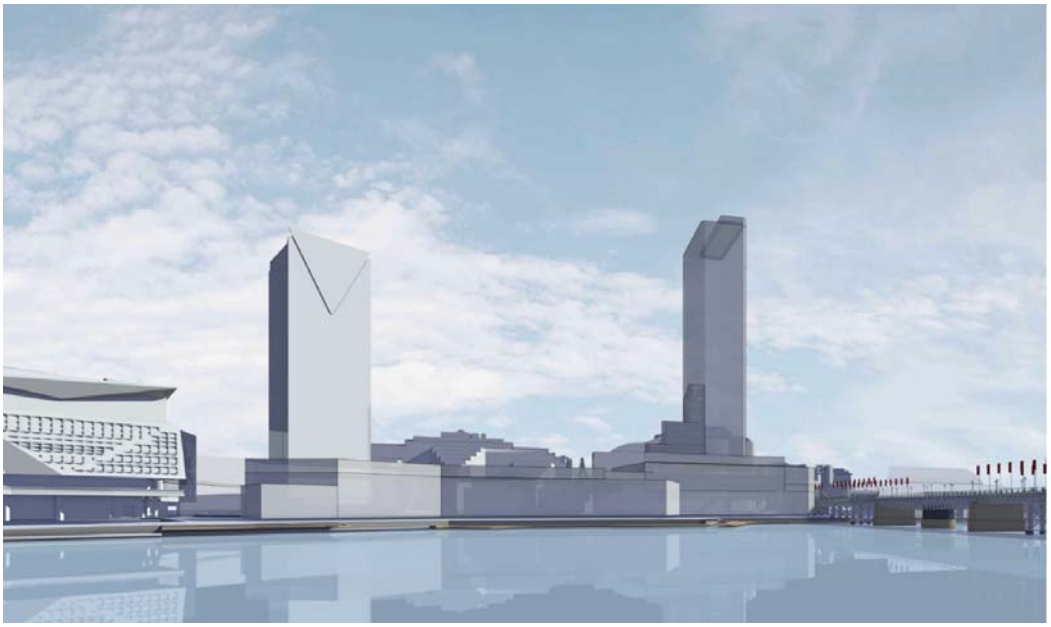
Figure 3 illustrates each of the different sub-options for the single option redevelopment.



Southern tower



Central tower



Northern tower

Figure 3 – Single tower redevelopment options
Source: fjmt

Each option was designed to achieve the same yield, ensuring each could be evaluated evenly. The various sub-options were considered in detail through the exercise of weighing up the benefits and drawbacks of each option on the surrounding land uses and public domain experience. **Table 1** below provides a summary of the benefits and disadvantages of each option.

Table 1 – Benefits of single tower options

Southern Option	Central Option	Northern Option
Benefits		
▪ sufficient floor plates for commercial uses; ▪ ability to provide a large northern accessible roof terrace on the podium rooftop; ▪ faster moving shadow over the Cockle Bay water; ▪ enhance view sharing opportunities for existing developments to the west; ▪ enhanced ability to capture views from the Site; and ▪ ability to provide enhanced east-west pedestrian connections.	▪ sufficient floor plates for commercial uses; ▪ faster moving shadow over the Cockle Bay water; ▪ enhance view sharing opportunities for existing developments to the west; ▪ enhanced ability to capture views from the Site; ▪ ability to provide enhanced east-west pedestrian connections; and ▪ enhanced building separation to the ICC Hotel, creating a positive relationship and minimising potential impacts.	▪ sufficient floor plates for commercial uses; ▪ ability to provide a large southern accessible roof terrace in a stepped form on the podium rooftop; ▪ faster moving shadow over the Cockle Bay water; ▪ enhance view sharing opportunities for existing developments to the west; ▪ enhanced ability to capture views from the Site; ▪ ability to provide enhanced east-west pedestrian connections; ▪ enhanced building separation to the ICC Hotel, creating a positive relationship and minimising potential impacts; ▪ ability to provide commercial address to the tower at the edge of the Pyrmont Bridge; and ▪ large proportion of shadow contained within the Site.
Disadvantages		
▪ close proximity to ICC Hotel, potentially resulting in reduced view sharing and overshadowing impacts; ▪ potentially creating a 'crowded' presentation of buildings on the skyline when viewed with the ICC Hotel; ▪ no ability to provide street address to the commercial tower, with a significant separation from the Pyrmont Bridge; and ▪ increased overshadowing of public domain to the south of the Site.	▪ closer proximity to ICC Hotel, potentially resulting in reduced view sharing and overshadowing impacts; ▪ no ability for east-west view corridor to be created at the Bunn Street pedestrian connection; ▪ positioning of the tower divides the Site in two, restricting the retail below due to the requirement of services through the central portion of the future shopping centre. ▪ negative implications on the potentially accessible roof terrace of the podium roof top, with awkward access around the base of the commercial tower; and ▪ no ability to provide street address to the commercial tower, with a significant separation from the Pyrmont Bridge.	▪ no ability for view corridor to the city from the future Bunn Street connection; and ▪ commercial tower overshadows the future publicly accessible roof terrace.

In balancing the above benefits and disadvantages, it was determined that the most appropriate outcome would be the northern tower option. A key benefit of this option was the ability for a commercial address to be achieved, with the tower having direct access to the prominent corner of Darling Drive and the Pyrmont Bridge forecourt.

Following this rigorous analysis, a viable and quality proposal was developed, being a podium building with a commercial tower located in the northern extent of the Site. This proposal was developed to a standard of obtaining SEARs for the project (issued on 9 December 2015) and commencing community consultation with key stakeholders, one of which was the One Darling Harbour Executive Committee, representing residents from the building opposite the Site on Darling Drive known as One Darling Harbour (50 Murray Street).

The full extent of feedback received through all consultation undertaken to date is outlined in Section 3.0, but pertinent to the analysis of this option is the feedback received from the One Darling Harbour Executive Committee. Feedback from these residents was critical of the proposal, with the following key elements cited for opposing the scheme:

- concern over the location of the commercial tower and suggestions it should be moved further south;
- suggestion the tower scale and form is out of place with the typology of built form in Darling Harbour;
- there would be overshadowing of the public domain in front of the shopping centre during lunch time hours;
- view sharing would be reduced from the 50 Murray Street building;
- concern over proximity to the Pyrmont Bridge and potential impacts to heritage;
- concern over proximity of commercial tower to the Cockle Bay foreshore; and
- Commercial use inappropriate as not in character with the existing tourism, entertainment and residential mix of the area. Residential would be welcomed over the proposed commercial use.

In light of this feedback, Mirvac and the project team commenced the second phase of the analysis of different alternatives for building typologies and land uses. This second phase is outlined below.

Phase Two – Refinement of Building Typology and Land Use

Given the close relationship of 50 Murray Street to the Harbourside Site and the string concerns raised, Mirvac took extensive time and effort to find a more balanced solution to meet the objectives of the project and alleviate potential concerns of adjoining residents.

Revised Commercial Tower Option/Potential Residential Option

Well into the development process and after substantial costs incurred on design and consultation, a significant decision was made to refine the location of the initial commercial tower and revisit the idea of potential complementary land uses on the Site.

The project team continued to refine the commercial tower option, seeking to resolve the concerns raised by landowners in the vicinity of the Site. In light of the analysis undertaken during phase one, both the southern and central tower locations were already discounted as sub-optimal. As such, the only possibility to relocate the tower was to shift the tower slightly to the south, but retaining its position generally in the northern portion of the podium extent. Furthermore, a minimum floor plate size of approximately 1,500m^2 (Net Lettable Area) was required to be maintained to ensure commercial tenant requirements could be achieved.

With this in mind, the project team began to examine how far the commercial tower could be shifted without resulting in a central tower option which had previously been discounted. The final alternative commercial tower option which was identified was a shifted tower 25m further south (i.e. 50m from the Pyrmont Bridge). **Figure 4** illustrates the original commercial tower, shown throughout initial consultation, and the amended commercial tower location.

Original commercial tower location during consultation

Commercial tower moved 25m south

Figure 4 – Revised commercial tower option following consultation
Source: fjmt

As illustrated in **Figure 4** above, the shift of the commercial tower envelope would allow for enhanced view sharing opportunities for residential apartments within 50 Murray Street.

Concurrently with this investigation of an amended commercial tower option, Mirvac began to examine the possibility of an alternative land use on the Site and the potential benefits this may bring in terms of a slenderer built form outcome.

Whilst a commercial use on the Site would complement the new shopping centre and was viable, the resultant built form outcome may not receive consensus amongst all stakeholders. It is acknowledged that there will never be complete consensus amongst stakeholders, but Mirvac considered that the objections to a commercial tower may be too significant to not explore further alternatives.

Based on the earlier investigations into potential land uses which could be accommodated on the Site, Mirvac and the project team considered a built form outcome of a residential tower. Immediately it became apparent that a residential tower would resolve many of the concerns raised through the consultation process. Given the requirements of a residential floor plate, a much more slender tower could be delivered, reducing the bulk and width of the tower which had been an area of concern for surrounding land uses.

The residential tower developed for consultation purposes is illustrated at **Figure 5**.

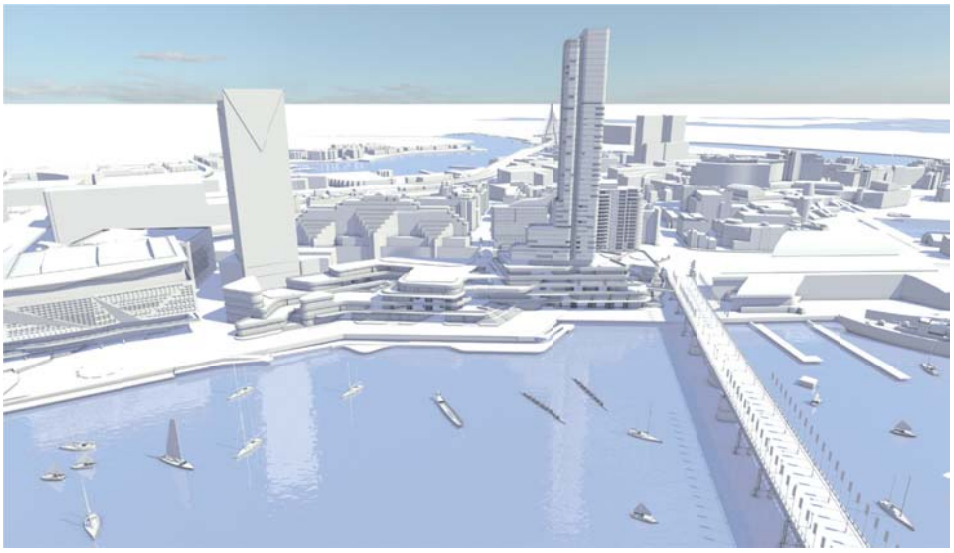


Figure 5 – Residential tower option on the Site
Source: fjmt

As illustrated in **Figure 4** above, the shiftment of the commercial tower envelope would allow for enhanced view sharing opportunities for residential apartments within 50 Murray Street.

With these two new options, further targeted consultation was undertaken with the residents of 50 Murray Street. During this consultation, the improvement in both options was acknowledged, yet objections were still raised on the matters of view sharing and the scale of the envelope.

In considering this feedback and the potential implications of the revised options, the commercial tower (both in original and revised form) began to appear as a less preferred option. Whilst view sharing would be enhanced more for 50 Murray Street in the revised commercial tower option, there would be more limited view sharing for the Ibis Hotel. Furthermore, one of the key reasons for locating the commercial tower within the northern portion of the Site would also be impacted, with a loss of a real street presence and address for the commercial building given the substantial distance from the Pyrmont Bridge.

Figure 6 provides a comparison of the three schemes presented to stakeholders, being the original commercial tower, the shifted commercial tower and the residential tower. This illustration presents an elevational view of the three towers compared to the existing buildings to the west of Darling Drive. Furthermore, it provides a plan of the different view sharing abilities of each tower option. It is evident from this illustration that the residential tower option will enable the greatest view sharing abilities.

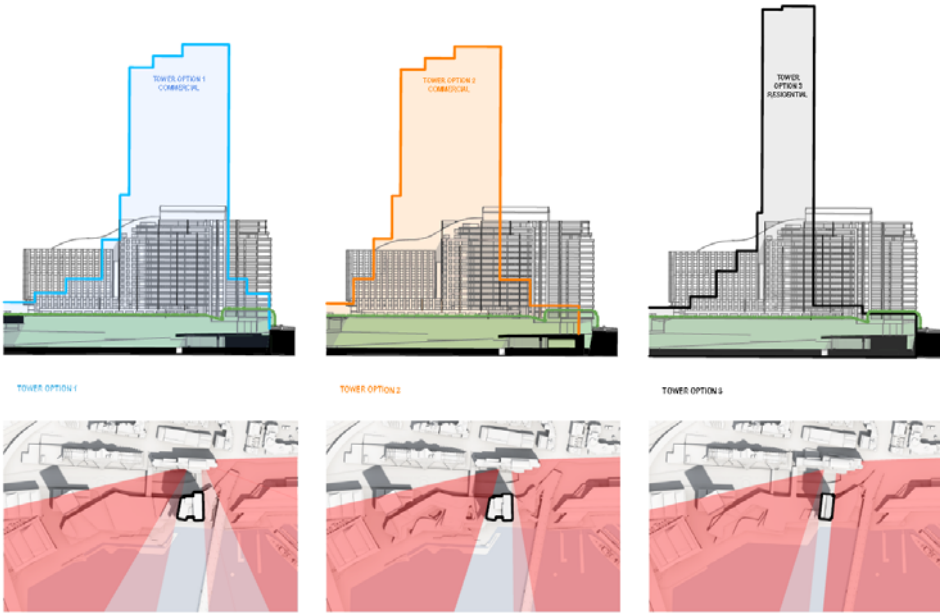


Figure 6 – Comparison of different tower options and view sharing abilities
Source: fjmt

In light of the culminating issues for the commercial tower options it was not pursued any further. Given the significant work undertaken by Mirvac and the project team, and the ability for a residential tower option to minimise potential impacts which had been raised during the consultation, this option was selected as the most appropriate to achieve a balanced development outcome on the Site.

Whilst a redevelopment alternative for a commercial tower would have merit, it would not deliver the same extent of benefits to the local area and more broadly as those able to be achieved through the proposal the subject of this SSDA. For example, these alternatives would not:

- increase housing supply and choice;
- assist in meeting residential dwelling targets for the region and addressing supply demands for residential apartments in areas well serviced by public transport;
- allow people to live closer to where they work/learn;
- encourage more sustainable travel behaviour through positioning residents within walking distance of Sydney's CBD and with immediate access to public transport/cycling alternatives;
- support a more compact, connected and liveable city; and
- support the attractiveness of commercial floor space in the Sydney CBD through providing opportunities for staff to live nearby, in turn encouraging companies to reside within the CBD.

Overall, as set out above, extensive investigations were undertaken on the benefits and drawbacks of multiple development options. On balance, the development of a residential tower above the podium building has been determined to be the most appropriate option given its lack of potential impacts and the benefits it will provide in supporting the redevelopment of the Harbourside Site and external benefits more broadly for the city. To ensure this final alternative is the most appropriate, Mirvac has engaged the services of Architectus to provide an independent third-party review of the overall Concept Proposal (refer to **Appendix C**).

1.5 Secretary's Environmental Assessment Requirements

In accordance with section 89G of the EP&A Act, the delegate of the Secretary of the Department issued requirements for the preparation of the EIS on 30 August 2016. A copy of the Secretary's Environmental Assessment Requirements (SEARs) included at **Appendix B**.

The EIS must include the documents listed in Schedule 1 of the *Environmental Planning and Assessment Regulation 2000* (the Regulation) and must meet the requirements of Schedule 2 of the Regulation, specifically the form specifications in Clause 6 and the content specifications in Clause 7. Several stakeholders were identified with whom consultation must occur during the preparation of the EIS.

Table 2 provides a detailed summary of the individual matters listed in the SEARs and identifies where each of these requirements has been addressed in this report and the accompanying technical studies.

Table 2 – Secretary's Environmental Assessment Requirements

Secretary's Environmental Assessment Requirement	Location in Report	
General Requirements		
The Environmental Impact Statement (EIS) must address the *Environmental Planning and Assessment Act 1979* and meet the minimum requirements in Schedule 2 the *Environmental Planning and Assessment Regulation 2000*. – form specifications in clause 6; and – form specifications in clause 7.	Throughout	-
The EIS must include an environmental risk assessment to identify the potential environmental impacts associated with the development.	Throughout	-
The EIS must be accompanied by a report from a qualified quantity surveyor	-	Under Separate Cover
Statutory and Strategic Context Report		
The EIS shall address the relevant statutory provisions applying to the site contained in all relevant EPIs, including:	Section 5.0	-
The Environmental Planning & Assessment Act 1979	Section 5.2	-
State Environmental Planning Policy (State & Regional Development) 2011	Section 5.4	-
State Environmental Planning Policy (Infrastructure) 2007	Section 5.4	Appendix R
State Environmental Planning Policy No. 55 - Remediation of Land	Section 5.4	Appendix H
State Environmental Planning Policy No.65 – Design Quality of Residential Apartment Development	Section 5.0	Appendix A
The Draft State Environmental Planning Policy (Competition)2010	Section 5.4	-
Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005	Section 5.4.1	-
Darling Harbour Development Plan No 1	Section 5.4.2	-
Relevant planning provisions, goals and strategic planning objectives		
The EIS shall Address the relevant planning provisions, goals and strategic planning objectives in the following: A Plan for Growing Sydney	Section 5.3.1	-
NSW Long Term Transport Master Plan	Section 5.3.2	-

Secretary's Environmental Assessment Requirement	Location in Report	
Sustainable Sydney 2030	Section 5.3.3	-
SEPP 65 Apartment Design Guide	Section 5.3.3	Appendix A
Sydney Development Control Plan 2012	Section 5.3.3	-
Sydney Streets Design Code and Sydney Street Technical Specification	Section 5.3.3	-
SICEEP Urban Design and Public Realm Guidelines	Section 5.3.3	-
SHFA's Darling Harbour Public Domain Manual 2015	Section 5.3.3	-
Development Near Rail Corridors and Busy Roads-Interim Guideline	Section 5.3.3	-
Guide to Traffic Generating Developments	Section 5.3.3	-
Sydney City Centre Access Strategy	Section 5.3.3	-
NSW Bicycle Guidelines	Section 5.3.3	-
NSW Planning Guidelines for Walking and Cycling	Section 5.3.3	-
City of Sydney Waste Minimisation in New Developments 2005	Section 5.3.3	-
Interim Construction Noise Guideline	Section 5.3.3	-
Crime Prevention Through Environmental Design (CPTED) Principles	Section 5.3.3	Appendix O
Heritage Council Guidelines Assessing the Significance of Archaeological Sites and Relics	Section 5.3.3	-
Heritage Council Guideline on Heritage Curtilages 1996	Section 5.3.3	-
Heritage Council Guideline, Design in Context -guidelines for infill development in the Historic Environment, 2005	Section 5.3.3	-
Visual and view impact		
Provide a detailed visual and view impact analysis, which considers the impact of the proposal when viewed from the public domain and key vantage points surrounding the site, including Pyrmont, Darling Harbour and Pyrmont Bridge and adjacent buildings.	Section 5.7	Appendix Q
Design Excellence, Built Form and Public Domain		
The EIS shall: Demonstrate the process for achieving design excellence at each stage of the planning process	Section 5.6	Appendix P
Provide a comprehensive options analysis for the built form, exploring a range of heights, tower locations and built forms, with justification of the selected option based on a thorough consideration of benefits/ potential impacts of each option	Section 1.4	Appendix A
Address and respond to comments and recommendations from SHFA's Design and Development Advisory Panel	Section 5.6	Appendix A
Address how the proposal and future development fits with the existing context and current and future desired character of Darling Harbour through the development of urban design and public domain guidelines	Section 4	Appendix A
Demonstrate how the orientation, height, bulk, scale and public domain treatment of the proposed development reflects the context of the surrounding area, and is well integrated into the current and future character of Darling	Section 5.7	Appendix A

Secretary's Environmental Assessment Requirement	Location in Report	
Harbour, SICEEP and Pyrmont		
Provide a framework for public domain and public access upgrades across the site and address opportunities to enhance connections with Darling Harbour, Sydney CBD (via Pyrmont Bridge) and Pyrmont	Section 5.10	Appendix Z
Demonstrate how the proposal identifies and is well integrated into key pedestrian desire lines to the surrounding area and critical pedestrian and cycle links between SICEEP, Darling Harbour, Pyrmont and the Sydney CBD	Section 5.12.4 and 5.12.5	Appendix K and R
Address design quality of the building and public realm, with specific consideration of the overall site layout and principles regarding public and private space, orientation, connectivity, street activation, (including the activation of Darling Drive) overshadowing, façades, massing, setbacks, building articulation, materials, landscaping, safer by design principles, rooftop and mechanical plant	Section 5.6, 5.8, 5.10, 5.26	Appendix A, K and O
Ecologically sustainable development (ESD)		
The EIS shall: Detail how ESD principles (as defined in clause 7(4) of Schedule 2 of the *EP&A Regulation 2000*) will be incorporated in the design, construction and ongoing operation of the development	Section 5.27	Appendix L
Demonstrate how the proposed development responds to sustainable building principles and best practice, and improves environmental performance through energy efficient design, technology and renewable energy	Section 5.27	Appendix L
Provide an integrated water management plan that considers water, wastewater and stormwater, including an assessment of water demand, alternative water supply, proposed end uses of potable and non-potable water, water sensitive urban design and water conservation measures	Section 5.20	Appendix V
Heritage		
The EIS shall: Provide a detailed heritage impact statement that identifies and addresses the impacts of the proposal: • on the heritage significance of the site and adjacent area, including any built and landscape heritage items, conservation areas, views or settings, and in particular the impact on the State heritage listed Pyrmont Bridge • on places, items or relics of significance to Aboriginal and non-Aboriginal people • against any endorsed conservation management plans for heritage items in the vicinity of the site	Section 2.3.3, 5.14 and 5.15	Appendix E and F
Provide a historical archaeological assessment to inform the HIS and identify any archaeology protected under the *Heritage Act 1977*	5.15	Appendix F
Address opportunities for heritage interpretation within the public domain	Section 5.14 and 5.15	Appendix E
Transport and Accessibility (construction and operation)		
The EIS shall include a Traffic and Transport Impact Assessment that provides an assessment of but is not limited to the following: Current daily and peak hour vehicle, public transport, pedestrian and bicycle movements, together with the cumulative impacts of existing, proposed and approved developments in the area, and existing traffic and transport infrastructure provided adjacent the proposed development	Section 2.3.4 and 5.12	Appendix R

Secretary's Environmental Assessment Requirement	Location in Report	
Operation of existing transport and future networks, including the light rail, ferry and bus networks and the CBD and South East light Rail (CSELR), and their ability to accommodate the forecast number of trips to and from the development	Section 2.3.4 and 5.12	Appendix R
Existing and future performance of key intersections providing access to the site and any road/intersection upgrades required to accommodate the development, using modelling and analysis supported by RMS	Section 2.3.4 and 5.12	Appendix R
Measures to be implemented to encourage users of the development to make sustainable travel choices, including walking, cycling, public transport and car sharing, such as the provision of end of trip facilities	Section 2.3.4 and 5.12	Appendix R
Appropriate provision, design and location of on-site bicycle parking, and how bicycle provision will be integrated with the existing cycle network	Section 2.3.4 and 5.12	Appendix R
Existing and proposed access (such as onto Bunn Street and Pyrmont Bridge) and parking arrangements (car, coaches/buses, taxi) for employees and visitors, including compliance with appropriate parking controls	Section 2.3.4 and 5.12	Appendix R
The proposed loading dock and servicing provisions, including access arrangements to the loading docks	Section 2.3.4 and 5.12	Appendix R
Detail potential impacts of the development on the capacity and operation of the light rail and ferry, including modelling of the impacts of key pedestrian routes on nearby light rail and ferry stops	Section 2.3.4 and 5.12	Appendix R
Likely impacts of the proposal during construction	Section 2.3.4 and 5.12	Appendix N
Likely future service requirements	Section 2.3.4 and 5.12	Appendix R
Environmental Amenity and Residential Amenity		
The EIS shall address: - solar access - acoustic impacts - visual privacy - view loss and view sharing - wind impacts - reflectivity - overshadowing - noise and vibration impacts to the surrounding area, including neighbouring properties and the public domain;	Section 5.11,5.17,5.18, 5.19, 5.11, 5.8, 5.16	Appendix A, M, Q, U
Demonstrate consistency with the requirements of SEPP 65 and the Apartment Design Guide	Section 5.9	Appendix A
Address consistency of the proposed residential land use in the context of the planning framework of Darling Harbour	Section 5.5	Appendix A and C
Drainage Flooding Climate Change and Sea Level Rise		
The EIS shall: Identify the potential flood risk from groundwater, wastewater, stormwater and sea level rise on the site	Section 5.18	Appendix V
Include proposals to mitigate any potential impacts, such as opportunities for water sensitive urban design within the public domain and landscaping and any other water conservation measures	Section 5.18 and Section 6	Appendix V
Contributions		
The EIS shall: Address the provision of public benefit, services, infrastructure, housing affordability options and any relevant contribution requirements to be agreed with SHFA	Section 5.26	Appendix Y

Secretary's Environmental Assessment Requirement	Location in Report	
Pre-submission consultation statement		
The EIS shall: Include a report describing pre-submission consultation undertaken, including consultation with the local community, issues raised during that consultation and how the proposal responds to those issues. This report shall document community consultation undertaken in relation to this proposal and the alternative proposal for the development of the Harbourside Shopping Centre (SSD 7375).	Section 4	Appendix J
Utilities		
The EIS shall: In consultation with relevant agencies, address the existing capacity and any augmentation requirements of the development for the provision of utilities, including staging of infrastructure	Section 5.17	Appendix I
Provide details of how infrastructure assets of various utility stakeholders will be protected or relocated during the demolition and construction of the project	Section 5.17	Appendix I
Staging		
The EIS shall: Set out the staging of the proposed development, including timing of public domain works and opportunities for interim land uses on sites awaiting development	Section 3.10	-
Prescribed Airspace for Sydney Airport		
Identify any impacts of the proposal on the prescribed airspace for Sydney Airport.	Section 5.25	Appendix X
Construction Management		
The EIS shall: Identify potential impacts of the construction on surrounding areas, such as noise and vibration, air quality and odour impacts, dust emissions, water quality, stormwater runoff, groundwater seepage, soil pollution and construction waste	Section 5.21	Appendix N
Insofar as excavation and/or remediation is proposed, provide details of the annual volume of materials to be extracted, processed or stored on site during construction and how the extracted material will be disposed of or reused.	Section 5.21	Appendix N
Provide details of community consultation, notification and complaints handling during any demolition, excavation and construction	Section 5.21	Appendix N

1.6 Planning Approvals Strategy

This State Significant Development Application (SSDA) is a staged development application made under section 83B of the EP&A Act. It seeks approval for the Concept Proposal over the entire Site and its surrounds.

More specifically, this staged DA includes the establishment of land uses, a maximum Gross Floor Area (GFA), building envelopes, a public domain concept, conceptual pedestrian and vehicle access and circulation arrangements and associated car parking provision.

Detailed development application/s (Stage 2 DAs) will accordingly follow the determination of the Concept Proposal seeking approval for the detailed design and construction of all or specific aspects of the redevelopment.

1.7 Other Approvals

In addition to the approvals noted elsewhere in this document, additional approvals will be required in order to permit the proposed development to occur. These approvals may include, but are not limited to:

- *Sydney Harbour Foreshore Authority Regulation* under clause 4 (for commercial activities and uses in Darling Harbour);
- *Roads Act 1993* (including Section 138 approvals);
- *Protection of the Environment Operations Act 1997* (including environmental protection licences);
- *Sydney Water Act 1994* under Section 73 (compliance certificate); and
- *Approval for OLS Protrusion under the Airports (Protection of Airspace) Regulations*.

These additional approvals, and any other which may be required, will be sought at the appropriate time.

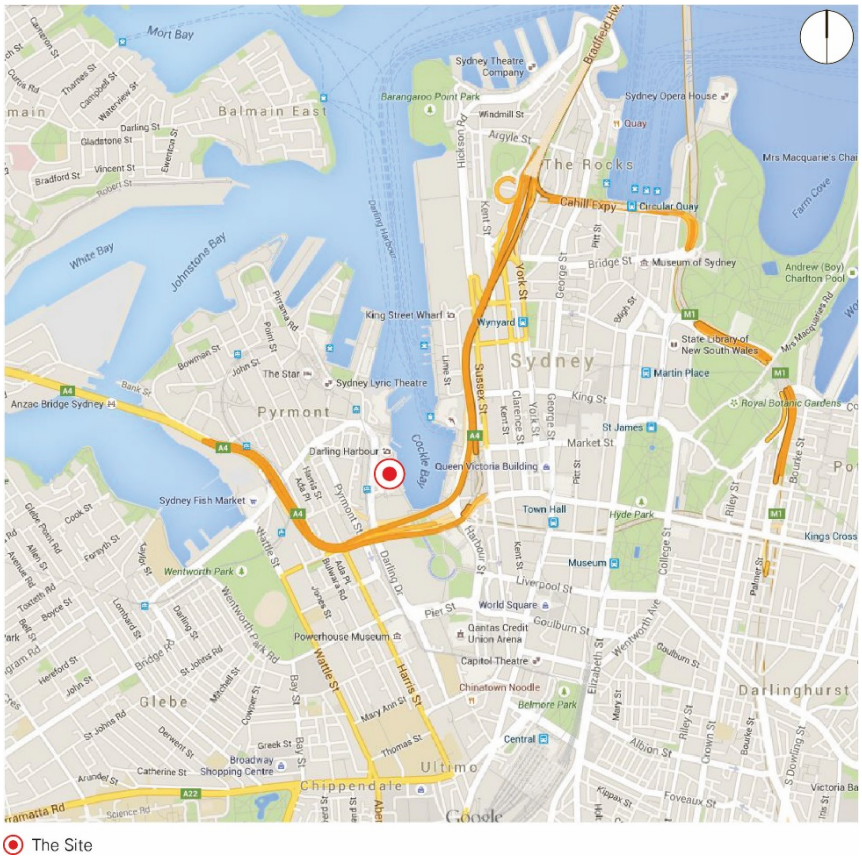
2.0 Site Analysis

2.1 Site Location and Context

The Harbourside Site is located within the Darling Harbour Precinct in the City of Sydney Local Government Area (LGA). Darling Harbour is a 60 hectare waterfront precinct on the south-western edge of the Sydney CBD, and to the east of the Pyrmont Peninsula. The Darling Harbour precinct is unique in terms of its function, location, land ownership and physical characteristics, and accommodates a wide range of land uses. These land uses predominantly relate to recreation, tourism, entertainment, retail, residential apartments and business.

Historically, Darling Harbour (and more specifically Cockle Bay) has been subject to a significant amount of land reclamation and infilling in order to create an artificial valley and shoreline for Darling Harbour. The central valley is open and flat, and runs in a north-south direction from the Cockle Bay Shoreline towards Haymarket. The topography gently rises to the east and west from the valley floor towards ridgelines located in the vicinity of Harris Street to the west and Hyde Park to the east.

The Darling Harbour precinct is undergoing significant redevelopment as part of the SICEEP, Darling Square, and IMAX renewal projects. These projects support the realisation of the NSW State Government's vision for an expanded 'cultural ribbon' spanning from Barangaroo, around to Darling Harbour and Pyrmont. The character of Darling Harbour has been continuously evolving since the 1980s and no longer reflects the original valley floor landscape. The urban, built form and public transport / pedestrian context for Harbourside will fundamentally change as these developments are progressively completed. A locational context area plan is provided at **Figure 7**.



The Site

Figure 7 – Location Plan of the Harbourside Development
Source: Google Maps and JBA

2.2 Site Description

The Harbourside Site occupies an area of approximately 2.05 hectares within the north western portion of the Darling Harbour precinct. The Site is generally bound by Pyrmont Bridge to the north, the SICEEP site to the south, Darling Drive and the alignment of the light rail to the west and Cockle Bay to the east. The location of the Harbourside Site is shown in **Figure 8** below and an aerial photograph illustrating the Harbourside boundary is provided at **Figure 9**. Please note **Figure 8** and **9** identify the indicative boundary of the site, refer to **Appendix A** for the exact extent of the site the subject of this application.

Figure 8 – Location Map
Source: Google Maps and JBA

Figure 9 – Aerial view of the subject site
Source: JBA and Google Maps

The legal description of the land to which this application relates is identified in **Table 3** below. The site is in the single ownership of the NSW Government (Sydney Harbour Foreshore Authority). Mirvac holds a long term lease to operate the Harbourside Shopping Centre. A survey plan is located at **Appendix D**.

Table 3 – Legal description and ownership of the site

Lot and DP	Owner
Lot 1 DP776815	Sydney Harbour Foreshore Authority
Lot 2 DP776815	Sydney Harbour Foreshore Authority
Lot 3 DP776815	Sydney Harbour Foreshore Authority
Lot 4 DP776815	Sydney Harbour Foreshore Authority
Lot 5 DP776815	Sydney Harbour Foreshore Authority
Lot 6 DP776815	Sydney Harbour Foreshore Authority
Lot 7 DP776815	Sydney Harbour Foreshore Authority
Lot 8 DP776815	Sydney Harbour Foreshore Authority
Lot 9 DP776815	Sydney Harbour Foreshore Authority
Lot 10 DP776815	Sydney Harbour Foreshore Authority
Lot 12 DP776815	Sydney Harbour Foreshore Authority
Lot 13 DP776815	Sydney Harbour Foreshore Authority
Lot 14 DP776815	Sydney Harbour Foreshore Authority
Lot 15 DP776815	Sydney Harbour Foreshore Authority
Lot 17 DP776815	Sydney Harbour Foreshore Authority
Lot 1010 DP 1147364	Sydney Harbour Foreshore Authority
Lot 1002 DP 844561	Sydney Harbour Foreshore Authority

2.3 Existing Development

The Site currently accommodates the Harbourside Shopping Centre; areas of public domain and associated landscaping; the obsolete Monorail infrastructure; and two pedestrian bridges linking to the Ibis and Novotel hotels respectively. Photographs of the existing development are provided in **Figures 10** to **17** below.

The Harbourside Site is generally linear in shape and occupies an area of approximately 2.05 hectares. The current Harbourside Shopping Centre building is distinctive due to its blue glazed roof and bubble like design. The building rises to a height of approximately three storeys. The Site does not have a basement nor any associated car parking spaces on title.

Harbourside Shopping Centre was opened in 1988 as part of the Bicentennial Program and has played a key role to the success of Darling Harbour as Australia's premier gathering and entertainment precinct. Harbourside is a large destination shopping centre with 114 retailers within the centre. The Harbourside Shopping Centre is predominantly focused on food and beverage offerings/restaurants and entertainment, with general retail tenancies included throughout the centre. The gross lettable area for the centre is approximately 20,000m^2 and approximately 12-13 million customers visit the centre annually. The Harbourside Shopping Centre is currently still operating.

A former monorail station (now disused) is located above the northern end of the Harbourside Shopping Centre. A set of stairs within the public domain provides access from Harbourside to Pyrmont Bridge from the lower promenade area fronting Cockle Bay. These stairs, positioned between the Harbourside Shopping Centre building and Pyrmont Bridge also previously provided access to the former monorail station.

A pedestrian footbridge, which forms part of the Harbourside Site, connects the former monorail station, Pyrmont Bridge and the northern end of Harbourside to 50 Murray Street and the Ibis Hotel on the western side of Darling Drive. A second pedestrian bridge, also located within the Site, is situated in the middle of Harbourside on its western boundary, connecting the upper level of Harbourside to the multistorey car park and Novotel hotel on the western side of Darling Drive.

The external public domain spaces within the Site are generally located adjacent to the waterfront promenade. These spaces are paved in red brick in a herringbone pattern, consistent with the Bicentennial paving adopting for Darling Harbour in 1988.

A loading dock located off Darling Drive provides access to the north western side of the Site. A ramp from Darling Drive is located immediately to the west of the Site.

Figure 10 – Harbourside Shopping Centre's eastern façade, viewed from the south east from Darling Harbour (April 2016)
Source: JBA

Figure 11 – Harbourside Shopping Centre aerial view from the east (April 2016)
Source: JBA

Figure 12 – Internal view of Harbourside (April 2016)
Source: JBA

Figure 13 – View of Harbourside from the west with ICC Hotel in the background (November 2016)
Source: JBA

Figure 14 – View of Harbourside with Novotel, Ibis and 50 Murray Street in the background (April 2016)
Source: JBA

Figure 15 – Southern pedestrian bridge over Darling Drive as viewed from the north (November 2016)
Source: JBA

Figure 16 – Northern pedestrian bridge, viewed from the west of the site (April 2016)
Source: JBA

Figure 17 – Harbourside western façade and relationship to Pyrmont Bridge viewed from the west (April 2016)
Source: JBA

2.3.1 Topography

Prior to European settlement, the Cockle Bay shoreline extended approximately 800m further to the south of its current location into Haymarket. Cockle Bay began to be modified in the early 19th Century by way of significant land reclamation and infilling, which was extended further north over subsequent decades up until the late 20th Century.

The land reclamation and infilling described above has resulted in an artificial valley that is open and flat, and runs in a north-south direction from Haymarket in the south to the Cockle Bay shoreline in the north. As a result, the site is generally flat with little variation in the ground level RL. This is reflected in the Survey Plan prepared by Rygate Surveyors (refer to **Appendix D**).

The topography around the Site gently rises away from the valley floor towards ridgelines located in the vicinity of Pyrmont Bridge and Harris Street to the west.

2.3.2 Landscaping and Vegetation

The Harbourside Shopping Centre is adjacent to large areas of hard landscaping (public plazas) to the east of the centre.

The plaza or waterfront public domain has an area of 4,326,36m^2 and connects with the remainder of the Darling Harbour public domain to the south of the Site. This area is paved with the red herringbone brickwork typical of the Darling Harbour Precinct. The paved area incorporates outdoor dining areas and a small amount of vegetation, including a row of planted trees to the east of the outdoor dining areas.

The remainder of the Site is generally sparsely vegetated with minor planter beds and small groups of trees.

2.3.3 Heritage and Archaeology

A Statement of Heritage Impact (SoHI) has been prepared by Curio Projects (**Appendix E**).

The SOHI identifies those heritage items that are present within the vicinity of the Site. The Site is not listed as a heritage item on the *Sydney Local Environmental Plan 2012* (Sydney LEP 2012); on the NSW State Heritage Register; or located in a conservation area.

The following heritage items are identified as being located within the vicinity of the Site and are listed on the NSW State Heritage Register:

- The Pyrmont Bridge located directly to the north of the Site; and the
- The Darling Harbour Woodward Water Feature is located on the harbour promenade, to the south of the Site.

There are two items within the vicinity of the Site that are listed on the Sydney Harbour Foreshore's S170 Register, they include:

- The Darling Harbour Rail Corridor which runs parallel to the western side of the site; and
- The Water Cooling System and Manifold which runs underneath the southern end of the site, spanning from east to west from Murray Street to the harbour.

There are fourteen items of local heritage significance and a single heritage conservation area within the general vicinity of the Site. These items are identified as:

- The Woolbroker's Arms Hotel, 22 Allen Street (Item no. I1206)
- The Corner Shop and Terrace Group, 224-302 Harris Street (Item no. I1233)
- Retail Premises – Harris Street Group, 304-308 Harris Street (Item no. I1234)
- Former Warehouse 'Harry Lesnie Pty Ltd', 47-49 Murray Street (Item no. I1244)
- Former Warehouse 'HS Bird & Co, 51-53 Murray Street (Item no. I1245)

- Pyrmont Terrace Group, 142-168 Pyrmont Street (Item no. I1264)
- Pyrmont Bridge Road Hotel, 11 Pyrmont Road (Item no. I1255)
- John Taylor Woolstore, 137 Pyrmont Street (Item no. I1263)
- Clarence Bonded and Free Stores, 139 Murray Street (Item no. I1246)
- Pyrmont Fire Station, 147 Pyrmont Street (Item no. I1265)
- Pyrmont Terrace Group, 86-92 Pyrmont Street (Item no. I1276)
- Pyrmont Bridge Hotel, 94-96 Pyrmont Street (Item no. I1277)
- Former Warehouse 'Bank od NSW Stores', 17-21 Pyrmont Bridge Road (Item no. I256)
- Samuel Hordern Fountain, Pyrmont Street, Corner Pyrmont Bridge Road (Item no. I1266)
- Pyrmont Conservation Area (Item no. C52)

The Pyrmont Conservation Area dates from one of the key period of layers for the development of Pyrmont as a direct result of subdivision of the Harris and Macarthur Estates. It is a good example of a mid to late Victorian working class community consisting of both residential and commercial buildings which are largely intact and make a positive contribution to the streetscape. A map illustrating the location of these heritage items and other items in the wider vicinity of Darling Harbour is provided at **Figure 18**.

Figure 18 – Heritage items surrounding Harbourside
Source: JBA

Archaeology

Non-Indigenous Archaeology

A Non-Indigenous Historical Archaeological Assessment has been prepared by Curio Projects (refer to **Appendix F**). The Assessment identifies that the subject Site has been subject to three primary phases of historical development.

Phase 1 relates to the early European occupation of the site (1788-1874) and outlines that there is moderate potential for archaeological resource associated with the Phase 1 occupation and commercial industrial use.

Phase 2 (1874-1960s) relates to the development and operation of the Darling Harbour Goods Yard. There is high potential for physical evidence of land reclamation undertaken to expand the Goods Yard during Phase 2 to survive at the site, including reclamation deposits and sea walls.

Phase 3 (1960s to present) relates to the closure of the Darling Harbour Goods Yard, including the demolition of the Goods Yard and construction of the extant Harbourside Shopping Centre. There is moderate potential for archaeological remains of the goods yard to survive. Physical evidence is likely to be limited to some structural remains including foundations of sheds and other structures and footings of other."

The Assessment outlines whether there is a low, moderate or high potential for archaeological resources and/or remains associated with the historical use of the land. This Assessment is detailed further in Section 5.0 of the EIS.

Indigenous Archaeology

An Aboriginal Heritage Due Diligence Assessment Report has been prepared by Curio Projects in accordance with the Office of Environment & Heritage (OEH) Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales, and in accordance with the SEARs. The Assessment Report is included at **Appendix F**.

Curio Projects conducted a search of the Aboriginal Heritage Information Management System (AHIMS) database and determined that there are no known Aboriginal sites or objects are located within or immediately near the Harbourside site.

Curio Projects advise that while the study area is likely located at the edge of what once would have been the original shoreline, land reclamation processes would have removed, covered or disturbed all Aboriginal cultural deposits, where they once were present at this location. Additionally, it is likely that the majority of the study area, overlapping the mapped area of the original shoreline of Darling Harbour, would have been a swamp and estuarine environment that would not have been suitable for human occupation.

2.3.4 Access

Pedestrian Access

Pedestrians can access the Harbourside Site from the public domain located directly to the east of the Site. The public waterfront domain is the main pedestrian connection point between the Site and the remainder of the Darling Harbour precinct. Pedestrian access is also available from the Pyrmont Bridge forecourt.

Pedestrian connections to the west are inhibited due to the location of the light rail corridor and the topography of the land; however pedestrian access is presently available via two elevated pedestrian walkways from Harbourside connecting to the Novotel Hotel Carpark and Ibis Hotel Carpark respectively.

The area surrounding the Site has a well-established pedestrian network and is characterised with high levels of pedestrian activity as a result of the mix of residential, commercial, retail and tourist land uses in the Darling Harbour precinct.

The major pedestrian links to the Darling Harbour Precinct include connections to Sydney CBD, Town Hall and Central Station via Pyrmont Pedestrian Bridge, pedestrian overpasses and at grade pedestrian crossings. These links are shown in **Figure 19**.

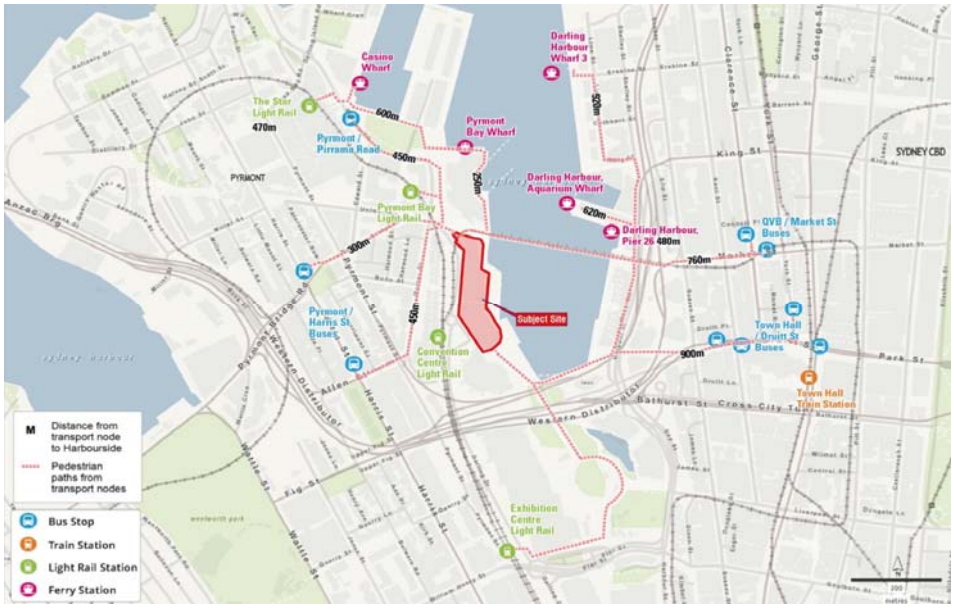


Figure 19 – Pedestrian Connectivity surrounding the site
Source: Urbis

The principal routes from Town Hall to the Site is Market Street followed by the Pyrmont Bridge. From Central Station, a direct route to the Site exists along Quay Street. In addition, the transformed Goods Line is now an active transport link, connecting cultural and educational institutions, and improving pedestrian access from Central Station and Railway Square through to Pyrmont and Darling Harbour. The Goods Line opened in August 2015.

The approved SICEEP development to the south of the Site includes a new 20 metres wide pedestrian pathway known as 'The Boulevard', linking Chinatown to the Harbourside Site and Cockle Bay.

Cycling

The Site is accessible to cyclists via a number of official cycle routes including the Sydney Harbour Bridge to Anzac Bridge route and the Anzac Bridge to Prince of Wales Hospital route (refer to **Figure 20**).

The north-south off road cycle path along Darling Drive provides access to the broader cycling network. A new dual lane two-way segregated cycle-way is to be provided along the western side of Darling Drive as part of the Darling Square development.

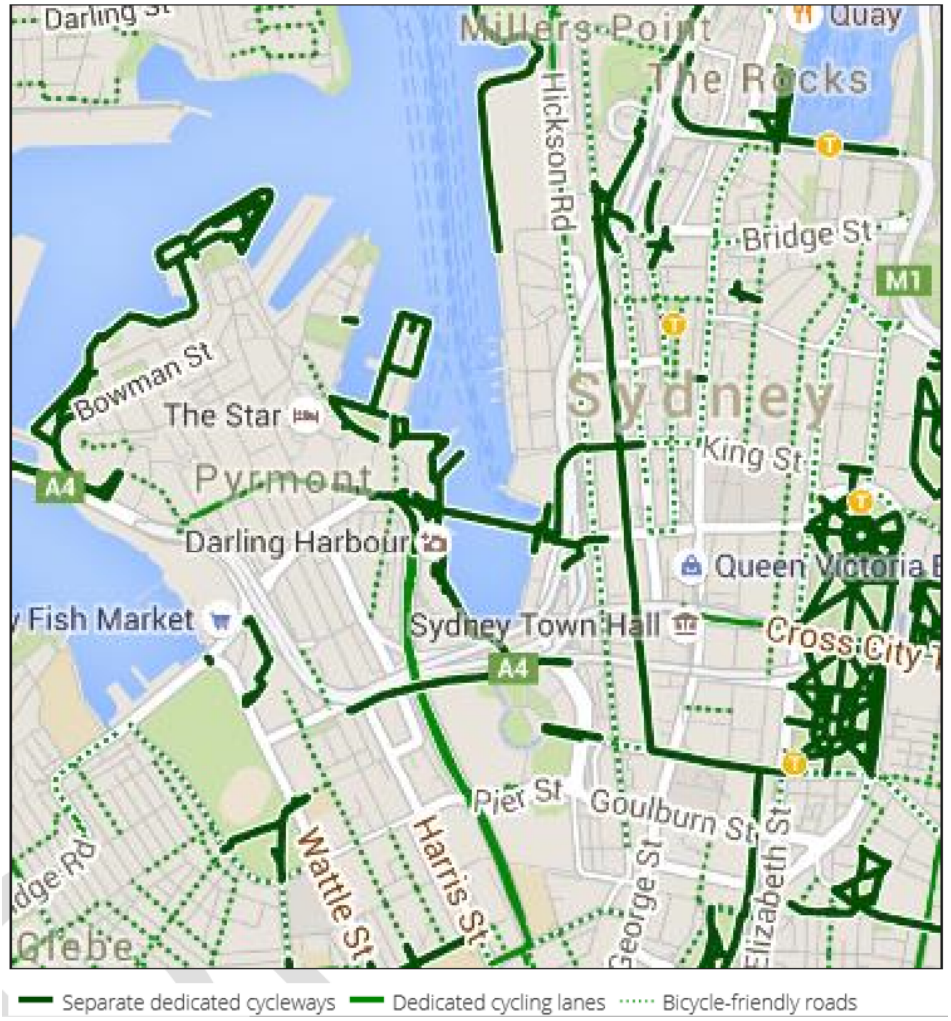


Figure 20 – Existing Cycle Network
Source: Arcadis

Rail

The Site has good rail connectivity, being located approximately 1.4km to the north-west of Town Hall Station and 1.7km north-west of Central Station. Town Hall and Central Stations are key stations in the Sydney Trains network with excellent connectivity to the wider network.

Almost all lines on the Sydney Trains network pass through Central Station, which also provides connections with wider NSW, Western Australia, South Australia, Queensland, and Victoria.

Lines connecting at Town Hall include:

- Eastern Suburbs and Illawarra Line (Bondi Junction and Sutherland);
- Bankstown Line (Bankstown and Liverpool);
- Inner West Line (Strathfield and Liverpool);
- Airport and East Hills Line (Airport and Campbelltown);
- South Line (Strathfield and Campbelltown);
- North Shore Line (Chatswood and Hornsby); and
- Northern Line (North Sydney and Macquarie Park).

Light Rail

The closest public transport service to the Site is the light rail station at the Convention Centre, providing a direct connection to the Inner West and Central railway station via Darling Harbour South. The light rail runs from Central Station to Lilyfield via Darling Harbour, The Star Casino, Wentworth Park, Glebe and Rozelle. **Figure 21** contains a map extract of the Sydney Light Rail network illustrating the Site.

Figure 21 – Light Rail Network
Source: Arcadis

Both the existing Convention Centre and Exhibition Centre light rail stops are currently proposed to be upgraded with longer platforms to accommodate longer light rail trains, increasing capacity at both of these stops. The ongoing construction of the Sydney CBD and South East Light Rail project (CSELR), will expand the light rail network to Circular Quay along George Street to Central Station, through Surry Hills, Moore Park, Kensington and Kingsford via Anzac parade and Randwick via Alison Road and High Street. The CSELR is expected to be completed in 2019.

Ferry

The Site is situated approximately 700m south west of the Darling Harbour Ferry Terminal, 300m south of the Pyrmont Bay Ferry Wharf, and 1km south of the King Street Ferry Wharf, approximately 5-10 minutes walking distance. Ferries from these locations connect the site with key locations, including Circular Quay, Milsons Point, and Parramatta. Ferries also connect the site with a variety of tourist and visitor attractions located around Sydney Harbour.

Bus

There are bus services in the vicinity of the Site. The closest bus stop is located at the Maritime Museum some 5 minutes walking distance from the Harbourside shopping centre. Bus no. 389 services this stop from North Bondi to the Maritime Museum. Harris Street is located 500m to the west of the site and is a bus corridor. A major bus terminal is located at Railway Square, approximately 1.8km to the south east of the site.

Vehicular Access

The key roads that provide access to the Site include the following:

- Pyrmont Bridge Road – is a State Road (west of Harris Street) connecting the Glebe area to Darling Drive near the western end of Pyrmont Bridge;
- Harris Street - is a 50 km/h State Road (south of Pyrmont Bridge Street) running parallel to Pyrmont Street. Parking is permitted on both sides of the street and regulated through parking ticket meters. During peak hour, no parking zones operate;
- Darling Drive – traverses the western edge of the Site in a north-south direction. It is the main arterial road that the development is accessed from; and
- Harbour Street – is classified as a State Road aligned in the north-south direction, parallel to Darling Drive and to the east of Darling Harbour.

2.3.5 Soil and Geotechnical Conditions

A Preliminary Geotechnical Assessment Report has been undertaken by Coffey Geotechnics and included as **Appendix G**. The report presents the findings of a desktop study of geotechnical information in close proximity to the site and immediate environs, which determines the likely geotechnical and soil characteristics of Harbourside. The report draws upon previous geotechnical investigations carried out surrounding the site in making its assessment.

Site Geology

The site is predominantly on reclaimed land that was formerly part of Cockle Bay. The present day shoreline has been progressively formed by infilling, with manmade fill deposits underlain by Hawkesbury Sandstone bedrock.

Coffey Geotechnics advise that the significant geological conditions of the site are complex, and are expected to include the following features:

- Pavement and heterogeneous fill;
- Estuarine and alluvial sediments of variable thickness, overlying;
- Slopewash and residual soil; and
- Hawkesbury Sandstone bedrock.

Subsurface Conditions

The Geotechnical Assessment Report identifies four distinct geotechnical subsurface profiles present across the site. These include:

- Fill – comprising sandstone and shale cobbles, concrete, coal brick and timber piles. The base of the fill is likely to be highly irregular and has often mixed with the upper surface of the underlying natural soil;
- Alluvium and estuarine deposits – comprising clayey sand with subordinate and interbedded silty clays and sand clays. Organic/peaty clay horizons may be present in the estuarine deposits, possibly corresponding to an area where mangrove swamps once existed;

- Residual soils – due to the erosional nature of the overlying alluvial deposits, residual soil is generally absent and where present is typically limited to less than 1m.
- Sandstone – The sandstone bedrock has been sub-divided into a number of separate units including:
  - Sandstone (Class V) extremely low to low strength; and
  - Sandstone (Class II or better) medium and high strength.

Data from which to develop a groundwater model for the site is extremely limited. Groundwater levels in the fill, sediments and rock would be anticipated generally within the range of harbour water levels, close to RL 0m AHD. Groundwater levels within the fill would be anticipated to vary with the tide and potentially illustrate hydraulic connection with the water of Darling Harbour.

Natural groundwater flow would be anticipated to be eastward towards Darling Harbour.

2.3.6 Site Contamination

A Preliminary Site Contamination Assessment Report has been prepared by Coffey Environments and included as **Appendix H**.

Records indicate that the Harbourside Site historically comprised a tidal mudflat prior to 1860. The site has been subject to historic reclamation which commenced in the 1860s to extend the Darling Harbour Branch railway line towards the Pyrmont Bay wharves. The Darling Harbour Goods Yard remained open until the 1980s when they were dismantled and replaced with the Harbourside Shopping Centre opening in 1988.

Site contamination investigations have been undertaken across the Harbourside Site in order to determine the presence and extent of potential contaminants as a result of historical site activities and uses including heavy metals, fuels and oils, asbestos and organic contaminants. Site investigations reveal that the following contamination sources are present including:

- Fill of unknown origin and quality;
- Waste cooking oil AST situated in the north-eastern portion of the site; and
- Former Darling Harbour Goods yards and associated Iron Wharf with the following potential sources TPH, PAH, BTEX, VOC/SVOC, Metals, Asbestos.

Groundwater Contamination

Given the proximity of the site to Darling Harbour and the local stratigraphy, it is expected that groundwater beneath the site will be saline and tidally influenced, with a net gradient towards Cockle Bay. Standing water levels recorded in monitoring wells installed to the southeast of the site ranged from 0.4m to 0.6m AHD. No registered groundwater bores are existing within the 500m radius of the site. Further discussion in relation to contamination and remedial strategies is contained within Section 5.20 of this EIS.

2.3.7 Utilities and Infrastructure

Arcadis have undertaken a desktop study of existing utility infrastructure services within and in the vicinity of Harbourside and undertaken subsequent consultation with service providers as detailed in the Utilities Report (**Appendix I**). Existing essential infrastructure services for water, sewer, gas, electricity, communications and stormwater are provided to the Harbourside site.

2.3.8 Water Cycle

Stormwater

Stormwater drainage within the Site is comprised of a below ground local network and trunk drainage and overland flow paths. Stormwater is captured by surface inlet pits within roadways, pedestrian thoroughfares and landscaped areas which drain into minor pipe networks, and ultimately into major trunk stormwater culverts that discharge into Cockle Bay. Overland flow paths which bypass the drainage network flow through the Darling Harbour Precinct and also discharge into Cockle Bay.

Flooding

The existing Harbourside Site is located downstream of significant urban catchment areas, making the site vulnerable to overland flows during major rainfall storm events. Refer to Section 5.0 for further details regarding the management of flood impacts.

2.4 Surrounding Development

The Harbourside Site is predominantly surrounded by commercial, retail, entertainment, tourist and residential related uses. The surrounding built form is generally medium to high density and is constructed in a wide variety of architectural styles. A map of the key developments surrounding the site is provided at **Figure 22**.

Figure 22 – Key Development surrounding Harbourside
Source: JBA

To the North

Pyrmont Bridge runs in an east-west direction over Cockle Bay and the forecourt of the bridge on its western landing forms the north boundary of the Site. Pyrmont Bridge is a heritage item and is a shared zone for pedestrians and cyclists, linking Pyrmont and the City (refer to **Figure 23**). To the north of the Harbourside Site and west of Pyrmont Bridge is a public domain area which contains pedestrian and bicycle access from Pyrmont. The Maritime Museum is located on the northern side of Pyrmont Bridge (refer to **Figure 24**).

Figure 23 – Pyrmont Bridge viewed from the west (April 2016)
Source: JBA

Figure 24 – Maritime Museum to the north of Harbourside and west of Pyrmont Bridge (April 2016)
Source: JBA

To the East

To the east of the Site is the public domain promenade on Darling Harbour foreshore which adjoins Cockle Bay (refer to **Figure 25)**. Further to the east of the Site, across the body of water which is Cockle Bay, is Cockle Bay Wharf (refer to **Figure 26**). Cockle Bay Wharf comprises a range of restaurants, bars and cafés. Darling Park Towers, a cluster of three commercial towers, are to the rear of Cockle Bay Wharf.

Figure 25 – Public domain walkway adjacent to Harbourside (April 2016)
Source: JBA

Figure 26 – View of Cockle Bay Wharf and Darling Park Towers behind (April 2016)
Source: JBA

To the South

Immediately adjoining the Site to the south is the International Convention Centre (ICC) which has recently completed construction. The convention facilities will provide 35,000m^2 of exhibition space and will hold events for up to 8000 people. A new pedestrian walkway known as Harbourside Place will provide a public domain link between the future ICC Hotel (discussed further below) and the ICC. Further to the south of the ICC is the remainder of the core facilities approved as part of the SICEEP Project, including the ICC Exhibition Halls, The Event Deck, The Theatre and Darling Square. **Figure 27** illustrates the ICC in April 2016 whilst construction was still occurring.

Figure 27 – International Convention Centre (November 2016)
Source: JBA

To the South West

Adjoining the south western boundary of the Site is the ICC Hotel, a new 35 storey hotel building associated with the SICEEP project. The ICC Hotel is currently under construction (refer to **Figure 28**).

Figure 28 – International Convention Centre Hotel (November 2016)
Source: JBA

To the West

The Site is separated by Darling Drive and the light rail infrastructure from development to the west. Four buildings, ranging in height from 13 to 22 storeys, flank the western side of Darling Drive. These buildings include the Ibis and Novotel hotel buildings (**Figure 29**); One Darling Harbour (50 Murray Street, Pyrmont) – a residential flat building (**Figure 30**); and The Oaks Goldsbrough Apartments.

Figure 29 – Novotel Hotel and Ibis Hotel (April 2016)
Source: JBA

Figure 30 – 50 Murray Street Apartments (November 2016)
Source: JBA

3.0 Consultation

Consultation is recognised as an important part to the successful delivery of the Harbourside project, with Mirvac speaking with the NSW Government, industry and the local community since the initial inception of the project. This dedication to consultation has continued throughout the initial Concept Proposal stage to inform the design development of Harbourside's preferred scheme, and the overall content of the Stage 1 Concept Proposal for which approval is sought.

A Community Consultation Summary Report (**Appendix J**) has been prepared by KJA and draws on the stakeholder and community engagement program undertaken prior to the lodgement of this SSDA for the Harbourside project. More specifically, the report provides commentary with respect to:

- the relevant stakeholders and current community context;
- the range of engagement/consultation programs held and the outcomes of these programs; and
- summarises design mitigation in response to issues raised.

The level of consultation undertaken up to the lodgement of this SSDA is more than appropriate and justified, significantly exceeding the minimum requirements of the Department of Planning's Major Project Community Consultation Guidelines (October 2007). Furthermore, the level of consultation undertaken is well in excess of that required by the SEARs and the Concept Proposal now represents a positive response to the process which has been followed.

3.1.1 Agency Stakeholder Engagement

A number of government agencies and departments were identified for early consultation, including:

- The Sydney Harbour Foreshore Authority
- The Sydney Harbour Foreshore Authority Design Review Panel
- The Department of Planning and Environment
- The City of Sydney Council
- Infrastructure NSW
- Transport for NSW
- Roads and Maritime Services
- The Office of Environment and Heritage
- Sydney Water

A number of meetings were held with each of their agencies/departments as detailed in the Community Consultation Report (refer to **Appendix J**).

3.1.2 Community/Business Stakeholder Engagement

In terms of the community/businesses as a stakeholder, participation in consultation was sought with the following stakeholders due to their proximity to the Site:

- Owners Corporation Executive Committee of One Darling Harbour (50 Murray Street)
- Owners of the Novotel and Ibis hotels (Abu Dhabi Investment Authority)
- Lendlease

- Owners of the ICC hotel
- The Star
- Australian Maritime Museum
- NSW Property Council
- Sydney Business Chamber
- Blackwattle Bay Coalition
- The Council of Ultimo/Pyrmont Associations (CUPA)
- Pyrmont Residential Action Group
- Harbourside Tenants

Local residents and representatives from the local community have been engaged through media, letter drops, website and internet activities.

3.1.3 Consultation and Communication Methodology

A number of key consultation and communication methods have been used across all stakeholder groups in the lead up to the lodgement of this SSD DA. These methods are set out in **Table 4**.

Table 4 – Key consultation and communication methods

Method	Content
Stakeholder Meetings	Key stakeholders (including agencies, Council and the local community) were identified and meetings held on the proposal. Meetings were used to identify early feedback. A summary of meetings is provided at Appendix J.
1800 Community Information Phone Number	A project specific 1800 Community Information Line (1800 795 667) was established.
Project email address	A project specific email address (harbourside.enquiries@mirvac.com) was established.
Letterbox Drops	Two letterbox drops were carried out in March and August 2016. Approximately 4,500 Pyrmont residents and businesses were contacted on each occasion of this letterbox drop within a 750m radius of the Site. The letterbox drops contained an invitation to community information sessions, the 1800 community information phone number and contact email address. The second letterbox drop provided updated details on the Concept Proposal.
Newspaper Advertisements	Newspaper advertisements were placed in The Inner Western Suburbs Courier on 29 March 2016 and The Hub on 31 March 2016 (two local newspapers). Each advertisement contained an invitation to community information sessions, the 1800 community information phone number and contact email address.
Community Information Sessions	Public Community Information Sessions were held on 7 April 2016, 8 April 2016 and 9 April 2016 (2 hours per session). Representatives of Mirvac and the project team attended each session to explain the proposal and answer questions. Feedback was captured through feedback forms and notes taken by the project team. Additional feedback was sent via email.

The Community Consultation Summary Report at **Appendix J** elaborates further on the above consultation and communication methods.

3.1.4 Outcomes from Consultation

As set out in Section 1.4, early engagement was undertaken by Mirvac during the development of the Concept Proposal, namely to identify an appropriate mix of land uses on the Site and to identify an appropriate built form outcome. A number of diverse issues were raised during this consultation by the key stakeholders. These issues did involve some overlap between agencies/departments and community/business stakeholders.

The key matters raised during the agencies/departments consultation included:

- development program expectations;
- various comments on the building envelope design and the design of a future building on the Site;
- the benefits and drawbacks of a commercial tower on the Site;
- possibilities for enhancing connectivity;
- potential traffic implications;
- relationship and interface with surrounding projects and new developments; and
- potential heritage impacts to surrounding items of significance.

The matters raised by each of the community/business stakeholders were much more diverse and related to specifics within the Concept Proposal and how the redevelopment project may impact on particular interests. The key topics and issues raised through the consultation with the community/business stakeholders included:

- amenity – potential overshadowing, loss of views and privacy;
- wind impacts;
- concerns of the building envelope, primarily related to the location of the initial commercial tower and overall building height (both podium and tower);
- traffic, transport and parking implications;
- public domain and access restrictions;
- potential heritage impacts; and
- consultation queries.

Each of the matters raised during the consultation period has been addressed throughout this EIS, and for completeness, a short response is provided within the Community Consultation Summary Report at **Appendix J**. Furthermore, the key areas of concern raised during the pre-lodgement consultation program have been addressed in the Concept Proposal refinement, importantly through the transition of the project from a podium and commercial tower to a podium and residential tower.

3.1.5 Influence of Consultation Process

As detailed throughout Section 1.4 of this EIS, the pre-lodgement consultation process undertaken by Mirvac and the project team has significantly influenced the final Concept Proposal. Mirvac initially prepared an alternative which it believed had good planning merit and would provide a positive outcome for the Site and the Darling Harbour precinct. This alternative was a redeveloped podium building containing a new shopping centre and a commercial tower above.

Through many months of consultation, however, it was identified that an improved alternative was available which would still satisfy the objectives of the project whilst better managing potential surrounding impacts. This enhanced alternative is the current Concept Proposal, being a redeveloped podium building containing a new shopping centre and a slender residential tower above.

Figure 31 provides an illustration of the consultation process and how the Concept Proposal has been refined throughout the process.

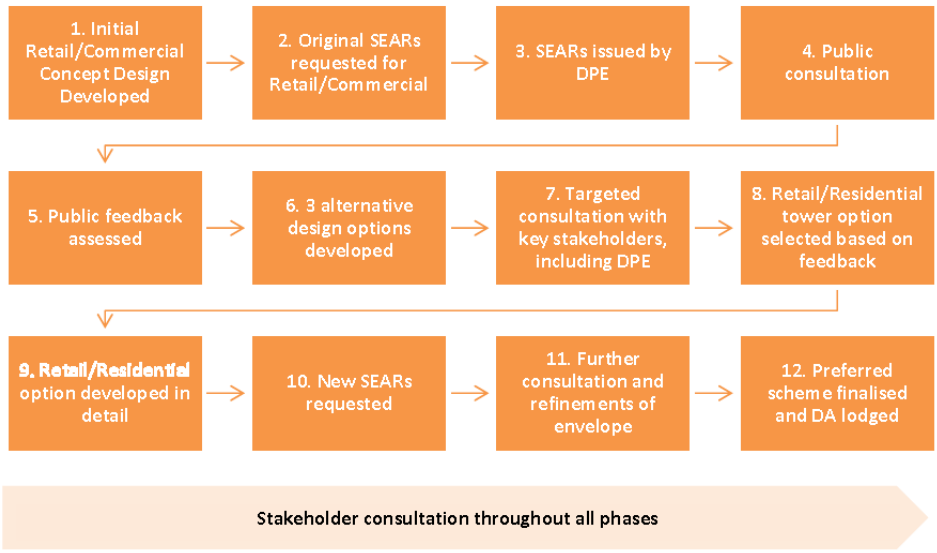


Figure 31 – Consultation process and refinement of Concept Proposal
Source: KJA

4.0 Description of the Development

Section 83B of the EP&A Act relates to staged development applications. A staged development application is one that sets out concept proposals for the development of a site, and for which detailed proposals for separate parts of the site are to be the subject of subsequent development applications.

The Harbourside Concept Proposal establishes the vision and planning and development framework which will be the basis for the consent authority to assess future development proposals within the Harbourside Site. It articulates what the proponent is seeking to achieve for future development and sets the broad parameters for the development of the Site.

This chapter of the report provides a detailed description of the Concept Proposal, and is informed by the Design Report prepared by fjmt (refer to **Appendix A**) and other supporting information appended to the report (see Contents).

The Harbourside Site is to be developed for a mix of non-residential and residential uses, including retail and restaurants, residential apartments, and open space.

The Concept Proposal seeks approval for the following key components and development parameters:

- in-principle demolition of existing site improvements, including the Harbourside Shopping Centre, the southern pedestrian bridge link across Darling Drive, obsolete monorail infrastructure, and associated tree removal;
- concept for a network of open space areas and pedestrian links generally as shown within the Public Domain Concept Proposal, to facilitate re-integration of the site into the wider urban context;
- building envelopes;
- land uses across the Site, including non-residential and residential uses;
- a maximum total Gross Floor Area (GFA) of 87,000m^2 for the future mixed use development (comprising both non-residential and residential floor space);
- basement parking;
- car parking rates;
- Urban Design and Public Realm Guidelines to guide future development of the built form and the public domain;
- a framework for achieving design excellence; and
- strategies for remediation, a strategy utilities and services provision, managing drainage and flooding, and achieving ecological sustainable development.

4.1 Urban Design and Public Domain Principles

Mirvac and the project team's vision is to create a new vibrant destination, nestled amongst other great places and a key component of the Darling Harbour precinct. The redevelopment of the Harbourside Site will contribute to the onward growth and legacy of Sydney on an international scale.

The key design principles underpinning the Concept Proposal include:

- establish a more regularised setback to the waterfront to enable an enhanced public domain which stiches together with the revitalised public domain to the south;
- enhance opportunities for views and vistas of the harbour and Pyrmont Bridge;
- create an appropriate scale and relationship to new and existing surrounding development, in particular the ICC and ICC Hotel to the south and Pyrmont Bridge to the north;
- create new and enhanced east-west linkages to improve access from Darling Harbour to Pyrmont and improved access from the Harbourside Site to the Pyrmont Bridge, integrating the Site into the existing local street and pedestrian networks;
- provide opportunities for activation, particularly at the ground level along the waterfront public domain to interact with the harbour edge;
- facilitate the development of a new residential tower above a revitalised shopping centre, allowing for a mixture of compatible uses which complement the wider uses within Darling Harbour and which integrate with existing and new linkages and connections;
- enable a new residential tower to be developed which responds to the surrounding context of tall buildings and appropriately manages building separation, view sharing and overshadowing considerations;
- allow for an integrated solution on the Harbourside Site through the development of a podium and tower form which presents as a single coherent development;
- improve public amenities and provide a public domain with social and green infrastructure for human comfort; and
- retain and celebrate the heritage of the Pyrmont bridge.

Whilst forming the basis for the Concept Proposal, these urban design and public domain principles will continue to be applied as part of the ongoing design evolution of the detailed components of the Harbourside redevelopment.

4.2 Urban Design and Public Domain Guidelines

The Concept Proposal includes supporting Urban Design and Public Domain Guidelines that have been developed by fjmt (refer to **Appendix Z**). These Design Guidelines have been developed to establish principles and objectives for the future development of Harbourside. The Design Guidelines (which build upon and take precedence over the Urban Design and Public Domain Guidelines prepared by Woods Bagot for INSW) set out objectives and related controls for key elements such built form, articulation, ground plane, materials, public realm, amenity, traffic, car parking and access and sustainability.

Future detailed development applications will need to demonstrate consistency with the objectives and controls of the Design Guidelines. It is not intended for the Design Guidelines to be prescriptive controls, but rather to provide a vision and allow interpretation of design principles that recognise that there are alternative solutions (supporting creativity and innovation) that can still achieve the overarching objectives.

Working in support of the maximum building envelope plans, the Design Guidelines provide a greater level of detail that covers key features of the future design and ensures that the built form will be appropriate within the context of the existing Darling Harbour, Pyrmont and CBD precincts that surround the Site.

4.3 Building Envelopes

The proposed building envelopes will set the maximum vertical and horizontal parameters for the future buildings and are detailed within the Concept Plans included as part of the Design Report prepared by fjmt (refer to **Appendix A**).

Detailed buildings within the prescribed envelopes will be subject to future Stage 2 DAs. These future application(s) will seek approval for the construction, fit out and use of buildings and public domain elements within the Harbourside Site.

The overall building envelope sought to be approved on the Concept Plans can be divided into two components, being the 'podium building envelope' and the 'tower building envelope'. A two (2) level basement envelope is also sought to be approved, with a future basement set to accommodate car parking and associated elements required to service the development. The specific components of these envelopes are described in further detail below.

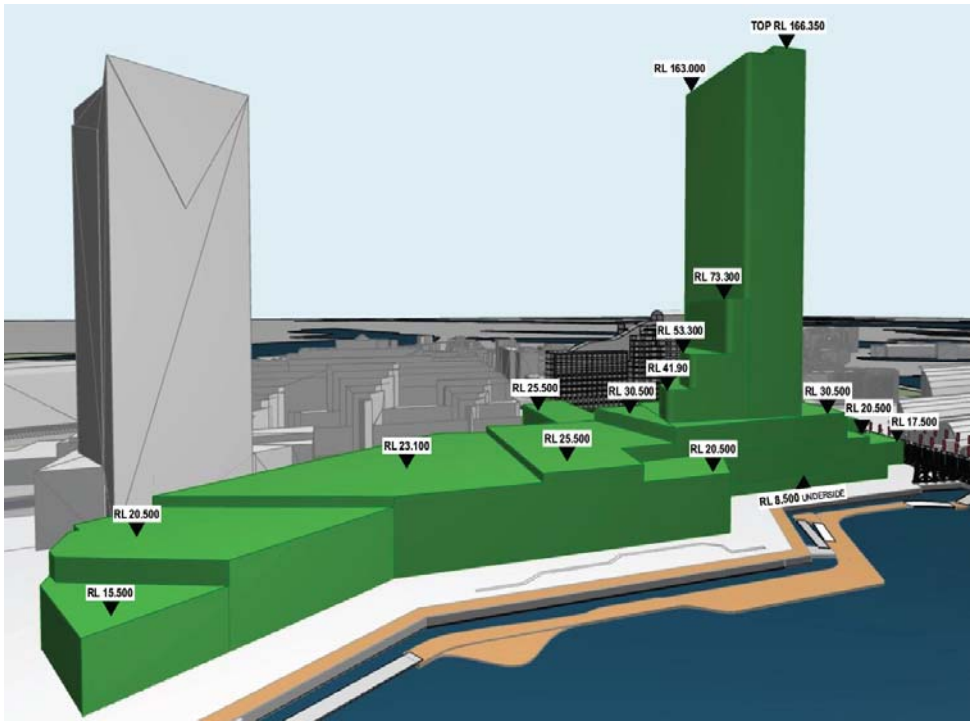
4.3.1 Podium Building Envelope

The podium component of the overall building envelope covers the majority of the Harbourside Site, excluding the areas of public domain which are to be delivered through the redevelopment. This envelope establishes the maximum site coverage for the future detailed podium building.

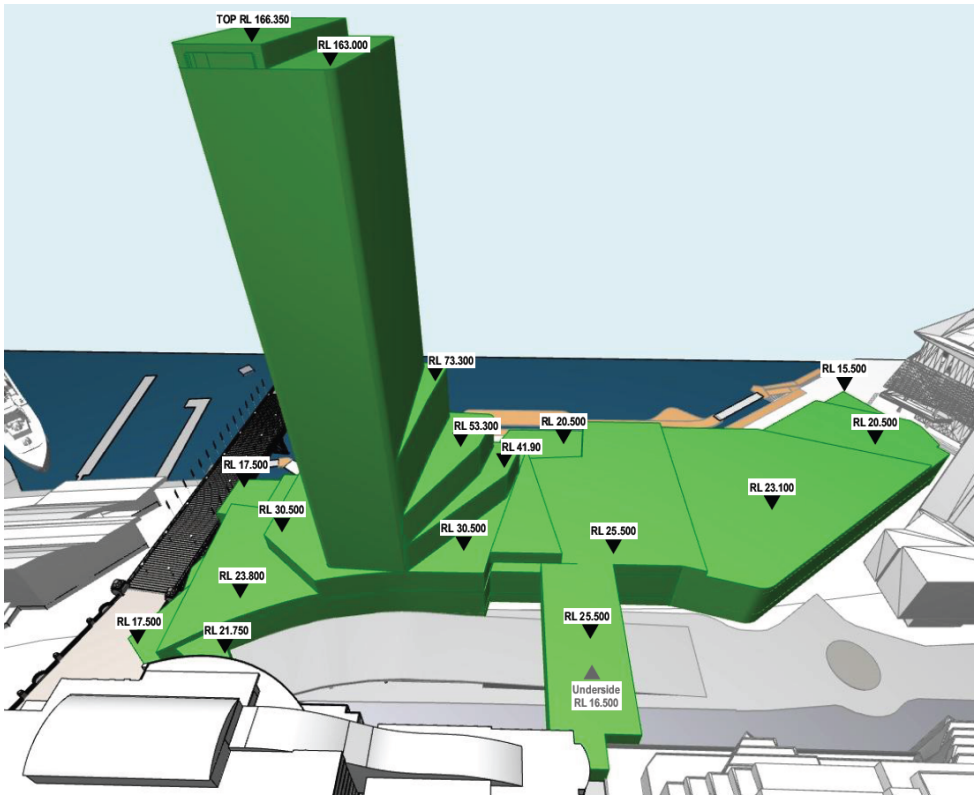
A range of different heights are prescribed for the podium building envelope, allowing for a stepped building form generally away from the waterfront and from Pyrmont Bridge. Included within the podium envelope are opportunities for future bridge connections to the west.

The podium building envelope ranges in height from RL15.5 to RL30.5.

Figure 32 illustrates the overall building envelope sought to be approved, with the podium envelope shown across the lower levels of the Site.



Envelope viewed from the south-east



Envelope viewed from the west

Figure 32 – Proposed building envelope
Source: fjmt

4.3.2 Tower Building Envelope

The tower component of the building envelope rises above the podium envelope. The tower and podium will be integrated through the provision of a stepped form at the lower levels of the tower envelope. Three steps are provided in the tower envelope, allowing for a tapered and slender envelope for the majority of the tower.

At the top of the tower envelope, a single step in height will occur. Overall, the maximum height of the tower envelope will be RL166.35.

Figure 33 illustrates an elevation of the proposed tower envelope.

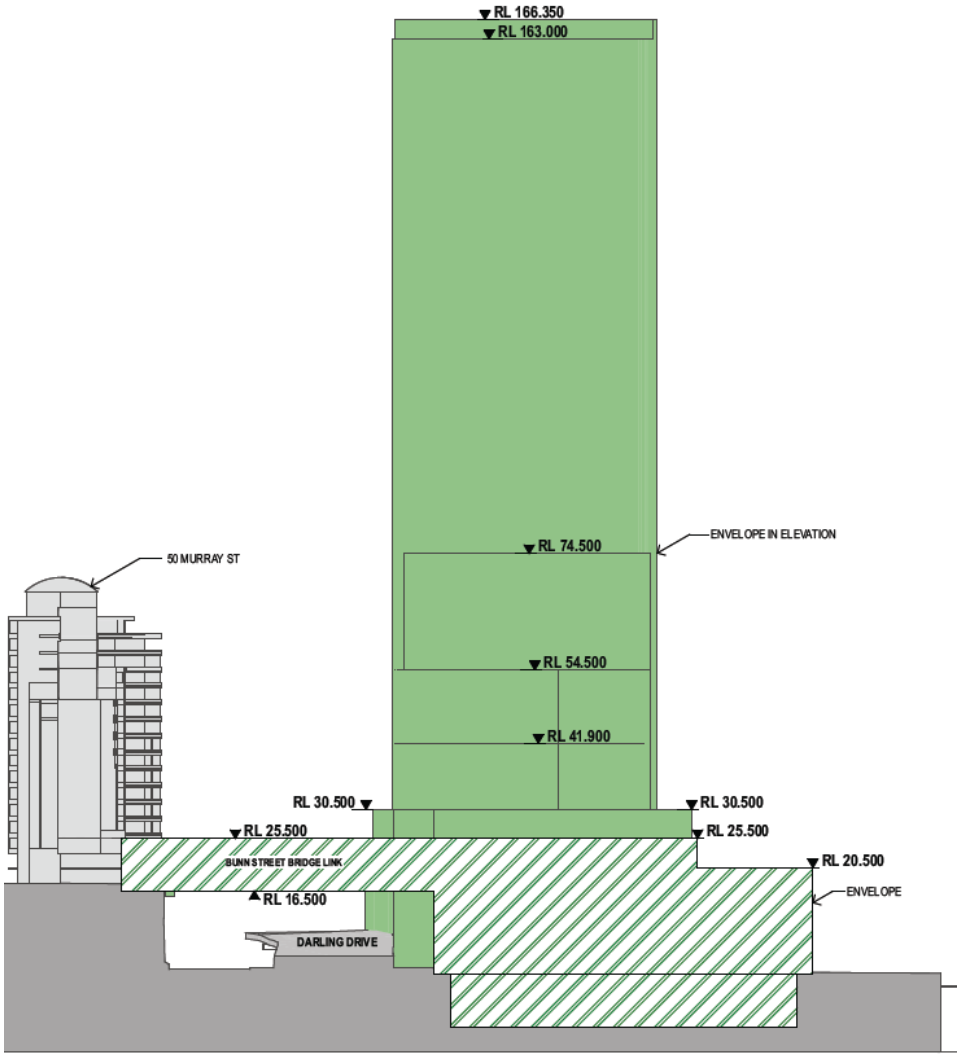


Figure 33 – Southern elevation of proposed tower envelope
Source: fjmt

4.4 Gross Floor Area

The Concept Proposal seeks approval for an overall maximum GFA across the Harbourside Site of 87,000m^2. This total GFA can be divided into the following categories:

- Non-residential uses floor space – 52,000m^2
- Residential uses floor space – 35,000m^2

4.5 Building Uses

The Concept Proposal seeks approval for a mix of non-residential and residential uses and open space on the Site. Generally, the breakdown of uses comprise:

- **Basement Levels** – car parking, motorcycle parking, bicycle parking, utilities and infrastructure, storage, loading/unloading, etc.
- **Podium Envelope** – non-residential uses (such as retail, restaurant, food and beverage offerings, entertainment facilities).
- **Tower Envelope** – Residential uses.

The range of uses to be included within the non-residential component of the Harbourside development is not intended to be restricted under the Concept Proposal. The future non-residential uses are intended to be selected from a range of uses consistent with the permissible uses prescribed under the Darling Harbour Development Plan No.1.

Mirvac has prepared a Retail Strategy which establishes the key principles for the future shopping centre (refer to **Appendix W**). This Retail Strategy identifies the key features of the future non-residential uses which will be located within the podium.

4.6 Illustrative Design

Illustrative design material, showing indicative design concepts has been prepared by fjmt. This material is included as part of the fjmt Design Report (refer to **Appendix A**), but does not form part of the documentation sought for approval as part of the Stage 1 Concept Proposal. This material is provided for information purposes only to assist the consent authority in its assessment of the Concept Proposal.

The illustrative design plans show one option of how a range of uses could be provided within the proposed building envelopes to support the vision for the Harbourside redevelopment. Future development applications will provide detailed designs for built forms within proposed building envelopes.

An illustration of a potential built form outcome within the proposed building envelopes is provided at **Figure 34**.

Figure 34 – Indicative illustration of a built form outcome as viewed from the east
Source: fjmt

4.7 Street Layout, Access and Parking

A concept for a series of new pedestrian links and an upgrade to the existing pedestrian network is provided as part of the Concept Proposal. One of the main aims of the Concept Proposal is to increase permeability and accessibility across the Harbourside site and improve connections between Pyrmont and Darling Harbour.

4.7.1 Street Network and Access

The Concept Proposal includes a number of alterations and connections to the existing road network in order to provide vehicular access to the development. Alterations or additions to the road network will be detailed further within subsequent detailed application(s).

4.7.2 Pedestrian Network

The proposed pedestrian network will link up with the existing pedestrian network and the initiatives developed under the SICEEP development, mainly consisting of the boulevard that will be up to 20m wide at the southern and middle sections, and 14m in the northern section of the Site. The main boulevard will provide a linkage from the south between Chinatown and Darling Square in Haymarket, Darling Central and Bayside within the SICEEP development and the Harbourside development and Cockle Bay, in the north.

A new pedestrian bridge from Bunn Street in Pyrmont to Darling Harbour is proposed as a major new pedestrian thoroughfare. The bridge will link major public gathering spaces within the Harbourside development and also provide direct access between the Site, Pyrmont, Darling Harbour and the general local surroundings. **Figure 35** illustrates the pedestrian network which will be created on the Site through the project.

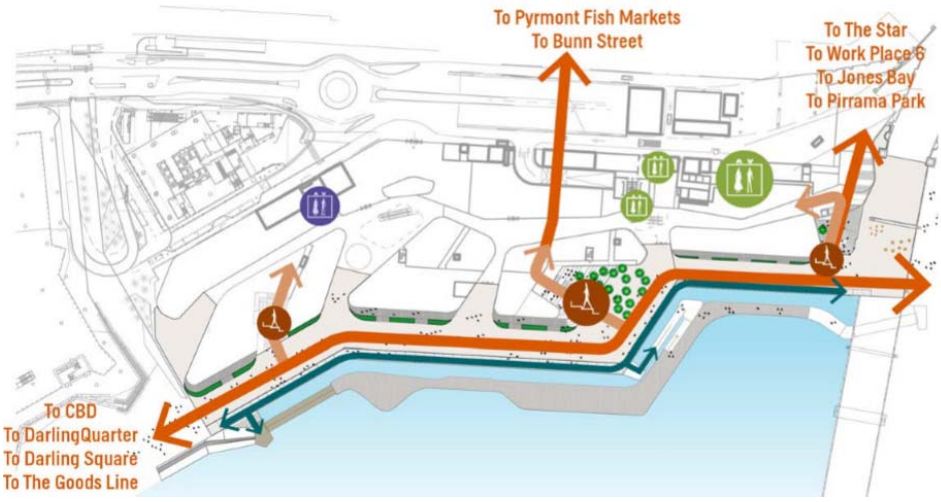


Figure 35 – Proposed pedestrian network
Source: Aspect

Access to the development will be enhanced at key entry points for cyclists with facilities provided where necessary through the future detailed application(s). No new cycle routes are proposed.

4.7.3 Car Parking

The Concept Proposal seeks approval for below ground basement parking. The future basement car park will be designed in accordance with AS2890.1. The basement car park is proposed to be accessed from the existing access road off

the Darling Drive. The future basement parking to be provided is to serve the needs of the future proposed residential uses.

Residential Car Parking Rates

The Concept Proposal seeks approval for residential car parking rates to be adopted in future detailed application(s). These rates are proposed to be:

- for each studio dwelling—0.2 spaces;
- for each one-bedroom dwelling—0.4 spaces;
- for each two-bedroom dwelling—0.8 spaces;
- for each three or more bedroom dwelling—1.1 spaces;
- for each dwelling up to 30 dwellings—0.167 spaces;
- for each dwelling more than 30 and up to 70 dwellings—0.1 spaces; and
- for each dwelling more than 70 dwellings—0.05 spaces.

Sydney LEP 2012 has been used as guidance in determining the proposed parking rates.

4.7.4 Vehicular Drop-Off

A new drop-off facility is proposed to provide opportunities for car, taxi and coach drop-offs. This facility will be provided off the existing Darling Drive up ramp, located between the roundabout and Pyrmont Bridge Road intersection.

The drop-off facility will be designed in accordance with best practice road design guidelines and with the relevant DDA standards. Consultation with the Roads and Maritime Services (RMS) and City of Sydney will be undertaken during the design development phase with regard to the drop-off facility.

4.7.5 Loading Dock

A future loading dock will be accessed via the access road from Darling Drive roundabout in place of the existing loading dock. Based on the anticipated scale of the future shopping centre component of the project, it is anticipated that the proposed loading dock will cater for the following vehicles:

- 2 x LRV bays;
- 7 x MRV bays;
- 2 x SRV bays; and
- 4 x service vehicle bays

The exact scale and vehicles to be accommodated in the loading dock will be refined throughout the development process, with detailed approval for the loading dock sought as part of future application(s).

4.7.6 Waste Management

Currently a waste management facility is provided within the service yard located adjacent to the existing loading dock. It is expected that a similar arrangement will be maintained for the future operation of the proposal.

4.7.7 Emergency Vehicle Access

Emergency vehicle access will be provided for ambulance and fire trucks to the future proposal, via:

- Darling Drive;
- Harbourside Place;

- the proposed access for the loading dock; and,
- the proposed access lane located between the ICC Hotel and the Harbourside development.

4.8 Landscaping Open Space and Public Domain

An indicative Public Domain Concept has been prepared by Aspect Studios (**Appendix K**). The indicative Public Domain Concept has been prepared in accordance with the Harbourside Urban Design and Public Realm Guidelines.

An illustration of the Public Domain Concept is provided at **Figure 36**, with key components summarised further below. Future detailed application(s) will seek approval for the detailed components of the public domain improvements including the exact make-up of the public domain, landscaping, and open space.

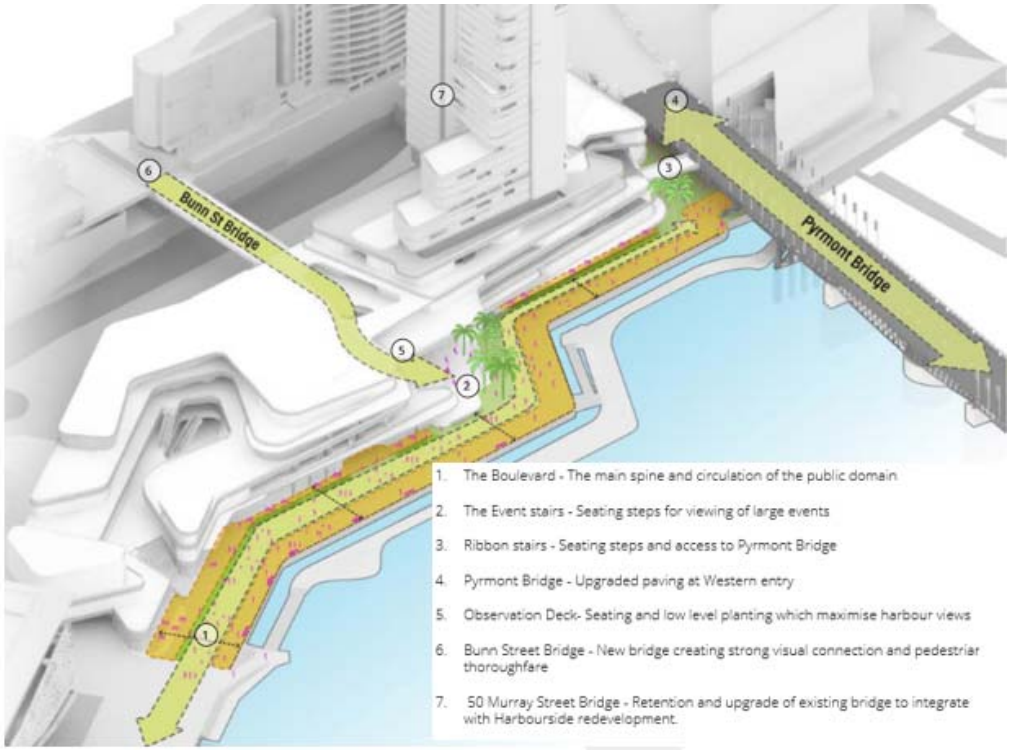


Figure 36 – Public domain concept plan
Source: Aspect

4.8.1 The Boulevard

The Concept Proposal includes the upgrade of the public domain area to the east of the Harbourside building adjacent to Cockle Bay. The boulevard width has generally been increased to 20m at the southern and middle portions of the Site to provide a more generous and inviting public experience along the waterfront. The width at the northern end, however, has been increased from 11m to 14m to reflect the more constrained site dimensions in this portion of the Site (refer to **Figure 37**).

Figure 37 – The Boulevard
Source: Aspect

4.8.2 The Event Steps

A key urban element proposed in the indicative public domain design are new event stairs and a public domain space to be known as Palm Cove. These new stairs will connect with the Bunn Street pedestrian link and provide a generous main entry to the upper retail levels. The event stairs will function as an important public domain space, providing a seating edge to Palm Cove where events are able to be carried out (refer to **Figure 38**). Aspect has addressed the potential for events in the Public Domain Report at **Appendix K**.

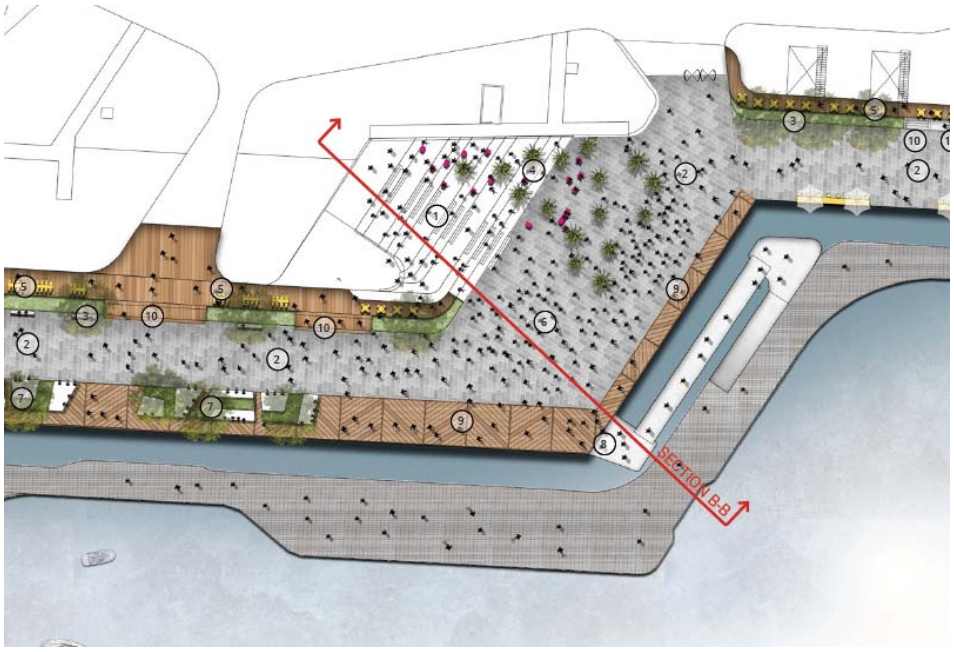


Figure 38 – Event Space and Palm Cove
Source: Aspect

4.8.3 The Ribbon Stairs

An enhanced interface between the new podium building and Pyrmont Bridge is proposed in the Concept Proposal. Within this space will be the new 'Ribbon Stairs', providing access from the waterfront level to the forecourt of the Pyrmont Bridge (refer to **Figure 39**). It is envisaged that these stairs will be a generous public domain space, providing a pedestrian route and seating opportunities.

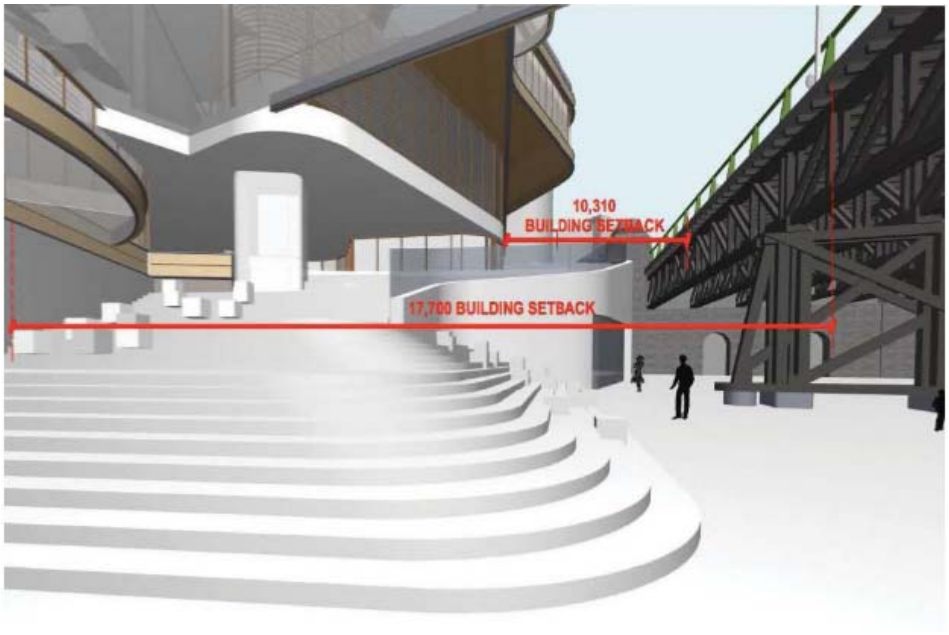


Figure 39 – Indicative image of Ribbon Stairs
Source: Aspect

4.8.4 Pyrmont Bridge Upgrade

The Concept Proposal also seeks to indicatively identify upgrades to the paving and connections at the western end of the Pyrmont Bridge. The extent of potential upgrades is illustrated in **Figure 40**.

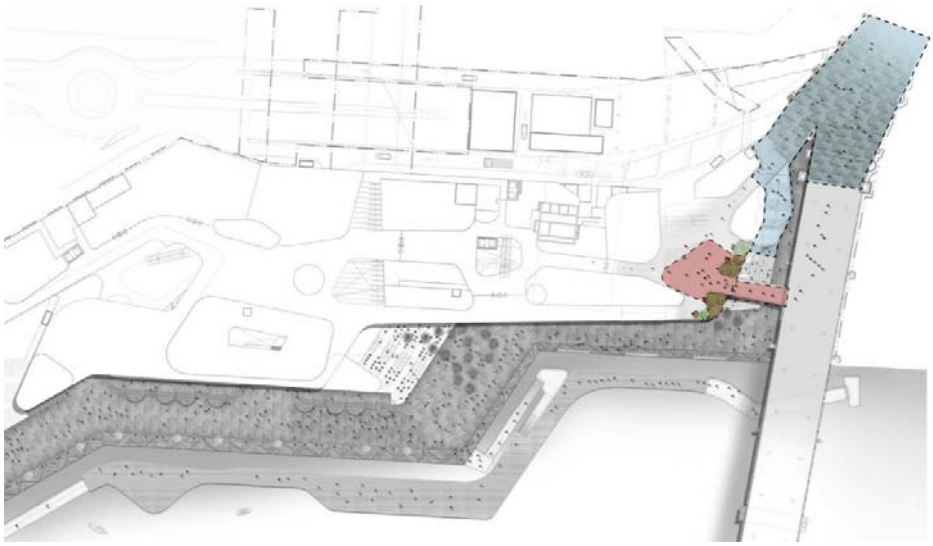


Figure 40 – Indicative image of the upgrade to Pyrmont Bridge (shown in blue)
Source: Aspect

4.8.5 Observation Deck

It is envisaged that an observation deck will be located on level 3 of the future podium building, with an intention on maximising the views available from the Site. This deck will be provided with paving, lighting, timber seating pods, timber seating decks, mass planting, and raised planter with seating edges for access by the general public (refer to **Figure 41**).

Figure 41 – Indicative plan of the observation deck
Source: Aspect

4.8.6 Pedestrian Bridges

Bunn Street Bridge

A key element of the public domain to be delivered through the project is a pedestrian bridge over Darling Drive providing a vital pedestrian connection from Bunn Street. This bridge will connect the Harbourside Site to Bunn Street, providing the general public enhanced access to Pyrmont. The improved connection will create a clear visual, as well as physical, pedestrian access between Pyrmont and Darling Harbour, reconnecting the Site to the surrounding locality and replacing the existing bridge at the southern end of the Site.

Existing Bridge Upgrades

The indicative public domain proposal also includes the retention of the existing pedestrian bridge connecting the now closed Convention Centre monorail station to 50 Murray Street and the Novotel Hotel.

4.9 Site Preparation and Remediation

The redevelopment of the Harbourside Site is proposed to be carried out in a staged manner, as demonstrated by the lodgement of a Stage 1 Concept Proposal. Accordingly, site preparation and remediation works are not sought at this stage, but will be carried out on in future stages and aligned with the progression of relevant detailed application(s). For completeness, an overview of the expected site preparation and remedial works is outlined briefly below.

4.9.1 Demolition Works

In order to make the Site suitable for development; the existing structures, landscaping, and public domain improvements will be demolished. The specific scope of demolition works and staging will be detailed within subsequent future application(s) following the determination of the Concept Proposal. For absolute clarity, no physical works are proposed as part of this subject Concept Proposal SSDA.

4.9.2 Remediation

A Preliminary Site Contamination Assessment has been prepared by Coffey Environments and is included at **Appendix H**. It has been determined by Coffey Environments that the Site can be made suitable for the proposed development.

Further details on the characterisation of the Site are to be carried out during future stages involving an intrusive field sampling programme and laboratory testing to characterise the nature and extent of potential contamination associated with the identified area of environmental concern. The findings of the investigation will then be used to assess the suitability of the Site for the actual land uses proposed and inform the requirement for remedial and or management measures to be incorporated into the future development.

4.10 Services and Utilities

The proposed building layout sought under the Concept Proposal has been selected in order to create minimal disruption to existing below ground infrastructure, however, the implementation of the Concept Proposal will inevitably result in the relocation of some infrastructure and services. Those infrastructure/services items that require relocation or augmentation to accommodate the Harbourside redevelopment project will be set out as part of future application(s).

A strategy for the relocation and augmentation of services and utilities as may be required in the redevelopment is set out in the Utilities Infrastructure Report prepared by Arcadis (refer to **Appendix I**).

4.11 Staging

The Concept Proposal is intended to be delivered through a single stage of development. It is expected that a future Stage 2 SSD DA will be lodged for the comprehensive redevelopment of the Site. The future detailed demolition of existing Site improvements and construction of new improvements on the Site may be carried out in separate stages. The detailed staging of the future development will be addressed in the future Stage 2 SSD DA.

5.0 Environmental Assessment

This chapter of the EIS contains our assessment of the environmental effects of the proposed development as described in the preceding chapters of this report.

Under Section 79C(1) of the EP&A Act, in determining a development application the consent authority has to take into account a range of matters relevant to the development including the provisions of environmental planning instruments; impacts of the built and natural environment, the social and economic impacts of the development; the suitability of the site; and whether the public interest would be served by the development.

The assessment includes only those key matters under Section 79C(1) that are relevant to the proposal. The key planning issues associated with the proposed concept plan are listed in **Table 5** below.

Table 5 – Key Planning Issues

Planning Issues	Assessment	Technical Study
Secretary's Environmental Assessment Requirements	Section 5.1	Appendix B
Environmental Planning and Assessment Act 1979	Section 5.2	-
Compliance with Planning Policies	Section 5.3	-
Compliance with Planning Instruments	Section 5.4	-
Design Excellence	Section 5.5	Appendix P
Built Form	Section 5.7	Appendix A
Visual and View Analysis	Section 5.8	Appendix Q
Reflectivity	Section 5.9	-
Public Domain and Landscaping	Section 5.10	Appendix K
Overshadowing	Section 5.11	Appendix A
Wind Impact	Section 5.12	Appendix U
Transport and Accessibility	Section 5.13	Appendix R
Accessibility	Section 5.14	Appendix T
Non-Indigenous Heritage	Section 5.15	Appendix E
Archaeology	Section 5.16	Appendix F
Noise and Vibration	Section 5.17	Appendix M
Infrastructure and Utilities	Section 5.18	Appendix I
Water Cycle Management	Section 5.19	Appendix V
Geotechnical Issues	Section 5.20	Appendix G
Contamination	Section 5.21	Appendix H
Construction Management	Section 5.22	Appendix N
Socioeconomic and Cultural Issues	Section 5.23	Appendix Y
Crime Prevention through Environmental Design	Section 5.24	Appendix O
Environmental Sustainability	Section 5.25	Appendix L
Ecologically Sustainable Development	Section 5.26	Appendix L
Development Contributions	Section 5.27	-
Site Suitability	Section 5.28	-
Public Interest	Section 5.29	-

5.1 Secretary's Environmental Assessment Requirements

Table 1 in Section 1.5 provides a summary which sets out the individual matters listed in the SEARs and identifies where each of these requirements has been addressed in this report and the accompanying technical studies.

The proposal is not considered to significantly impact on any matters of National Environmental Significance as defined under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). As such, no separate approval under the EPBC Act is considered necessary.

5.2 Environmental Planning and Assessment Act 1979

5.2.1 State Significant Development

The EP&A Act establishes a specific assessment system to consider projects classed as State significant development (SSD). State significant development is such development deemed to be of state significance and includes for example projects considered located in precincts regarded as important by the NSW Government, such as Darling Harbour. As noted, the proposed development the subject of this DA is classed as SSD.

Section 83B of the EP&A Act relates to staged development applications. A staged development application is a one that sets out concept proposals for the development of a site, and for which detailed proposals for separate parts of the site are to be the subject of subsequent development applications. The application may set out detailed proposals for the first stage of development.

This development application is a Staged SSD Development Application (DA), comprising a concept proposal for the entire site. A staged development application is commonly referred to as a 'Stage 1 Development Application' or a 'Concept Proposal'. These terms are used interchangeably throughout the consultant reports, but should be interpreted to mean 'staged development application' (for the purposes of section 83B of the EP&A Act) in each instance.

Section 83D of the EP&A Act provides that while any consent granted on the determination of a staged development application for a site remains in force, the determination of any further development application in respect of that site cannot be inconsistent with that consent.

This EIS has examined and taken into account to the fullest extent possible all matters affecting or likely to affect the environment by reason of the proposed development. **Table 6** provides an assessment of the proposed development against the objects of the EP&A Act.

Table 6 – Objects of the EP& A Act 1979

Object	Comment
5(a)(i) To encourage the proper management, development and conservation of natural and artificial resources, including agricultural land, natural areas, forests, minerals, water, cities, towns and villages for the purpose of promoting the social and economic welfare of the community and a better environment.	The Concept Proposal will contribute to the proper management, development and conservation of the natural and artificial resources of the site. In particular, measures outlined in the ESD report prepared by Cundall and included as Appendix L will be implemented to ensure the conservation of natural resources throughout the construction and operational phases, and existing artificial resources and infrastructure will be retained where practicable. The Concept Proposal will promote the social and economic welfare of the community by providing an improved urban environment for retail and residential use, and will greatly enhance a key location that is presently underused. The Concept Proposal will contribute to a better environment through the implementation of sustainability measures, and the provision of extensive public domain works.
5(a)(ii) To encourage the promotion and co-ordination of the orderly economic use and development of land.	The proposed Stage 1 SSD DA involves the orderly redevelopment of the Harbourside Site for mixed uses. The Proposal will promote economic growth and make greater use of an underutilised site in a prime location.
5(a)(iii) To encourage the protection, provision and co-ordination of communication and utility services.	The Concept Proposal will not impact on the provision or coordination of communication and/or utility services. Relevant utility providers have been consulted during the development of the Concept Proposal.
5(a)(iv) To encourage the provision of land for public purposes.	The Concept Proposal supports the provision of a substantial quantum of public domain works, to the benefit of existing and future workers, general public, surrounding residents and the wider community.
5(a)(v) To encourage the provision and co-ordination of community services and facilities.	The Concept Proposal nominates the upgrade of the public domain which will enhance community facilities and services. These uses will be formalised in future DAs.
5(a)(vi) To encourage the protection of the environment, including the protection and conservation of native animals and plants, including threatened species, populations and ecological communities, and their habitats.	The proposal would be undertaken in a highly modified and disturbed urban environment, and would not impact on biodiversity values. The site is not considered to have habitat suitable for any threatened flora and fauna.
5(a)(vii) To encourage ecologically sustainable development.	The Concept Proposal accords with the principles of Ecologically Sustainable Development, as set out in Schedule 2 of the EP&A Regulation 2000. This is further considered in Section 5.19 of this EIS.
5(a)(viii) To encourage the provision and maintenance of affordable housing.	The Concept Proposal does not include affordable housing, but it is expected that contributions will be made to support affordable housing.
5(b) To promote the sharing of the responsibility for environmental planning between different levels of government in the State.	Extensive consultation has been undertaken with various levels of government and government agencies during the preparation of the Concept Proposal, and all government agencies will be afforded the opportunity for further input into the development process during the public exhibition process.

Object	Comment
5(c) To provide increased opportunity for public involvement and participation in environmental planning and assessment.	The community consultation carried out assisted the development of the proposal and is detailed in Section 3.0 of this EIS. Further consultation will be carried out during design development, prior to the commencement of construction, and throughout the construction period.

5.3 Compliance with Planning Policies

The proposed Concept Proposal is generally consistent with the provisions of the relevant planning policies identified in the SEARs, as detailed in the following sections and other supporting technical information appended to the report.

5.3.1 A Plan for Growing Sydney

A Plan for Growing Sydney is the foundation for achieving region-wide outcomes in relation to the economy and employment centres and corridors; housing and transport; environment; parks and implementation and governance for Sydney. The goals which support the overarching vision for Sydney to become a strong global city and a great place to live are:

- *A competitive economy with world-class services and transport;*
- *A city of housing choice with homes that meet our needs and lifestyles;*
- *A great place to live with communities that are strong, healthy and well connected; and*
- *A sustainable and resilient city that protects the natural environment and has a balanced approach to the use of land and resources.*

The plan notes that Sydney's appeal to international investment and skilled workers is driven by the diversity of activities which surround commercial core. Providing a mix of residential, commercial and retail activity, arts and cultures public spaces and parks contribute to Sydney's global city reputation.

The subject Site is part of Sydney's Cultural Ribbon (refer to **Figure 42**). The Plan specifies that the cultural ribbon includes buildings and parks such as the War Memorial, Royal Botanic Gardens Sydney Opera House on the eastern side of the city and connects to the emerging post-industrial cultural facilities on the western side of the city. The ribbon also includes The Walsh Bay Arts Precinct which meets the emerging Barangaroo, Darling Harbour with its future convention facilities, the National Maritime Museum and tourist facilities.

All of these venues are important to Sydney's tourism and entertainment economy contributing to the CBD being Australia's pre-eminent tourist destination.

The inter-relationship of these vibrant cultural facilities along a renewed urban foreshore will generate great social, economic and community benefits and will add to Sydney's reputation as a global city.

The Concept Proposal is consistent with the Plan for Growing Sydney in that it aims to:

- contribute to the strengthening of 'Global Sydney' as a centre for economic, and cultural activity;
- provide a mix of residential and retail to contribute to Sydney's global city reputation.
- provide employment opportunities during the construction and operation period of the proposed development; and
- supporting existing and new public transport infrastructure, as well as providing employment within close proximity of existing services and facilities.

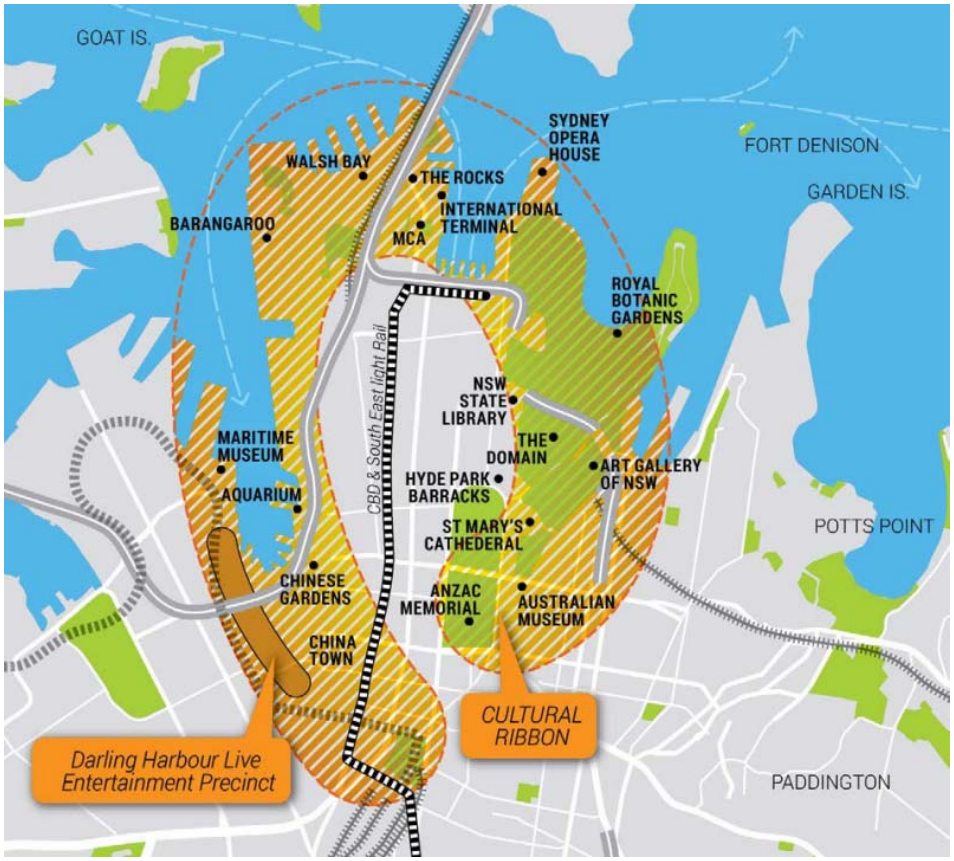


Figure 42 – The Cultural Ribbon
Source: A Plan for Growing Sydney

5.3.2 NSW Long Term Transport Masterplan

The NSW Long Term Transport Masterplan was published by Transport for NSW in December 2012. The Masterplan focuses on key transport challenges identified during an extensive consultation process, and sets out how the NSW Government aims to respond by integrating transport services, modernising the transport system, growing the network to meet future demand, and maintaining important road and public transport assets.

The Concept Proposal is consistent with the Masterplan in the following ways:

- it supports the expansion of the Light Rail System, by providing employment opportunities in direct proximity to an existing Metro Light Rail station (Harbourside);
- it will assist in unclogging the Sydney CBD transport system by connecting more people to existing Light Rail Infrastructure and encouraging patronage on an existing network with spare capacity;
- it will encourage walking by extending the surrounding street network into the Harbourside, creating a pedestrian link from Bunn Street, and improving the connectivity to Pyrmont bridge; and
- it will encourage public transport use by providing employment opportunities in close proximity to light rail, rail, bus and ferry services.

5.3.3 Additional Relevant Planning Policies

The Concept Proposal is also consistent with the key planning policies identified in the SEARs, as outlined in **Table 7** below.

Table 7 – Summary of consistency with relevant Strategies, EPIs, Policies and Guidelines

Instrument/Strategy	Comments
Strategic Plans	
Sustainable Sydney 2030	The Concept Proposal is generally in accordance with the aims of Sustainable Sydney 2030. Key measures include: ▪ reducing greenhouse gas emissions by investigating opportunities to utilise renewable energy generated on the site, designing for efficient energy use, and saving embodied carbon through slab retention; ▪ supporting increased direct and indirect employment in the entertainment and retail sectors; ▪ supporting public transport usage by encouraging Rail/Light Rail patronage; ▪ improving pedestrian access to the Sydney Harbour foreshore through the provision of new pedestrian connections throughout the site; and ▪ providing new and upgraded recreational and cultural facilities to promote social interaction and community cohesion.
SEPP 65 Apartment Design Guide	The Concept Proposal is consistent with the objectives of the ADG as set out in the Design Report prepared by fjmt (refer to Appendix A). The illustrative design scheme demonstrates a suitable detailed residential development can be provided within the proposed building envelope.
Sydney Development Control Plan 2012	The Sydney DCP 2012 is not applicable, notwithstanding that the Concept Proposal is generally consistent with the objectives of the DCP as relevant to the proposal.
Sydney Streets Design Code and Sydney Streets Technical Specification	The Concept Proposal is generally consistent with the Technical Specification.
Infrastructure NSW SICEEP Urban Design and Public Realm Guidelines	Detailed consideration has been given to the Urban Design and Public Domain Guidelines in the concept proposal for Harbourside. The Design Report included at Appendix A provides a summary of how the proposal responds to key aspects of the Urban Design and Public Domain Guidelines.
SHFA's Darling Harbour Public Domain Manual 2015	Detailed consideration has been given to the SHFA's Darling Harbour Public Domain Guidelines in the concept proposal for Harbourside. The Public Domain Design Report included at Appendix K provides reflects these guidelines in the proposal.
Development Near Rail Corridors and Busy Roads-Interim Guideline	Renzo Tonin & Associates have set out the relevant criteria against which each Stage 2 SSD DA will be assessed (refer to Appendix M). These criteria include the provisions of the *Development in Rail Corridors and Busy Roads – Interim Guideline* and the relevant rail vibration guidelines.
Guide to Traffic Generating Developments	The content of a Guide to Traffic Generating Development has been considered at a high level in the Concept Proposal and will be considered in more detail as part of the future Stage 2 SSDAs.
Sydney City Centre Access Strategy	The Concept Proposal is consistent with the strategy in that it provides retail and residential space in walking/cycling distance of services and facilities. The location of a retail and residential development within the centre of Sydney will improve public transport patronage and the modal split of travel away from private car usage.
NSW Bicycle Guidelines	The proposed cycle access for the Harbourside development will connect with the Darling Drive cycle network and the internal cycle route within the Darling Harbour Precinct via Tumbalong Park. Access to the development will be enhanced at key entry points for cyclist with facilities provided where necessary.
NSW Planning Guidelines for Walking and Cycling	The Concept Proposal will improve walkability and cycle access across the City through the provision of new on and off-road routes, active transport facilities, and wayfinding signage. The Concept Proposal will improve connectivity to the surrounding street network to the Sydney CBD, and Pyrmont/Ultimo.

Instrument/Strategy	Comments
City of Sydney Waste Minimisation in New Developments 2005	The Waste Classification Guidelines have been considered in the Construction Environmental Management Plan at Appendix N.
Interim Construction Noise Guideline	The Interim Construction Noise Guideline has been considered in the Noise and Vibration Assessment (refer to Appendix M).
Crime Prevention Through Environmental Design principles	CPTED principles are addressed in Appendix O and Section 5.17 of this EIS.
Heritage Council Guidelines Assessing the Significance of Archaeological Sites and Relics	The Guidelines are addressed in Appendix E and F, and Section 5.14 and 5.15 of this EIS.
Heritage Council Guideline on Heritage Curtilages, 1996	The Guidelines are addressed in Appendix E and F, and Section 5.14 and 5.15 of this EIS.
Heritage Council Guideline, Design in Context-guidelines for infill development in the Historic Environment 2005	The Guidelines are addressed in Appendix E and F, and Section 5.14 and 5.15 of this EIS.

5.4 Compliance with Planning Instruments

The following planning instruments are relevant to the Concept Proposal:

- State Environmental Planning Policy – (State & Regional Development) 2011;
- State Environmental Planning Policy – Infrastructure 2007;
- State Environmental Planning Policy No. 55 Remediation of Land;
- State Environmental Planning Policy No 65 – Design Quality of Residential Apartment Development;
- Draft State Environmental Planning Policy – (Competition) 2010;
- Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005; and
- Darling Harbour Development Plan No. 1.

The SSD DA's consistency and compliance with the relevant strategic and statutory plans and policies is located in **Table 8** or discussed in more detail below.

Table 8 – Compliance with relevant strategic and statutory plans

Instrument	Comments
SEPP (State & Regional Development)	Pursuant to the SEPP, a project within the Darling Harbour site will be SSD if it has a capital investment value (CIV) of $10 million or more. The Stage 1 Concept Proposal has a CIV of over $10 million, and is therefore identified as SSD and considered to be development of State and/or Regional Significance. This EIS has accordingly been prepared in support of the DA.
SEPP (Infrastructure)	The proposed development triggers consultation with NSW Roads and Maritime Services (RMS) under the provisions of Schedule 3 of the SEPP as the proposed Concept Proposal will generate, over 10,000m^2 of floor space, and accommodate over 200 motor vehicles, and the redevelopment is within close proximity to the existing light rail corridor. The future Stage 2 SSD DAs may also require referral to relevant infrastructure providers.
SEPP 55 (Remediation of Land)	Clause 7 of SEPP 55 specifies that a consent authority must not consent to the carrying out of any development on land unless it has considered whether land is contaminated and if the land is contaminated, it is satisfied that the land is/can be suitable for the proposed development. A Preliminary Site Contamination Assessment has been prepared for the site by Coffey Environments and is included at Appendix H. The Plan has been summarised in Section 5.21 of this EIS. In summary, the Plan considers that the Site can be made suitable for the proposed development and future uses, and outlines a strategy to ensure that the requirements of SEPP 55 are appropriately addressed.

Instrument	Comments
State Environmental Planning Policy No 65 - Design Quality of Residential Apartment Development	The Concept Proposal is consistent with the provisions of SEPP 65 and the objectives of the Apartment Design Guide. Refer to Section 5.4.1 below.
Draft SEPP (Competition)	The proposed Concept Proposal is consistent with the aims of the Draft SEPP (Competition) in that it will promote economic growth and competition within NSW.
Darling Harbour Development Plan No 1	The Concept Proposal is consistent with the provisions of the Darling Harbour Development Plan No.1 (DHDP). Compliance with the DHDP is discussed in further detail in Section 5.4.3 below.

5.4.1 State Environmental Planning Policy No 65 – Design quality of Residential Flat Development

Fjmt have prepared an assessment of the concept proposal against the design principles of SEPP 65 (included within the Design Report provided at **Appendix A**). It should be noted that the SEPP 65 Assessment includes a design verification statement, as well as a detailed assessment of the illustrative design against the objectives of the ADG.

5.4.2 Sydney Harbour Catchment REP

The Site is identified within the following areas under the *Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005* (SREP):

- the Sydney Harbour Catchment Area;
- the Foreshores & Waterways Area Boundary; and
- the City Strategic Foreshores Area.

Part 3, Division 2 within the SREP refers to matters which are to be taken into consideration by consent authorities before granting consent for development.

Table 9 illustrates the proposal's consistency with the relevant provisions and matters for consideration set out in clauses 20 to 27 of the SREP.

Table 9 – Consistency with the relevant provisions of the SREP

Relevant matters for consideration	Comment
Biodiversity, ecology and environment protection	Specific WSUD measures will be implemented into applications where appropriate to manage stormwater runoff and water quality. Vegetation proposed within the public domain will incorporate a range of native species contributing to biodiversity, and will enhance the ecological qualities of Darling Harbour.
Public access to, and use of, foreshores and waterways	The Concept Proposal improves access to the Sydney Harbour Foreshore through providing indicative designs of enhanced public domain features adjoining the waterfront.
Maintenance of a working harbour	The Concept Proposal does not relate to 'working waterfront' land, therefore no 'working harbour' uses will be lost as a result of the proposed development.
Interrelationship of waterway and foreshore uses	The Concept Proposal does not directly impact upon access to or uses within the waterway.
Foreshore and waterways scenic quality	The Concept Proposal is located a sufficient distance away from the foreshore and its waterways to ensure it will have no impact upon its scenic qualities. The proposed redevelopment will enhance the public domain along the foreshore, whilst the proposed tower is well set back from the waterway edge.

Relevant matters for consideration	Comment
Maintenance, protection and enhancement of views	A View and Visual Impact Analysis has been prepared and is submitted with the Concept Proposal. This analysis examines the impacts (including cumulative impacts) of the proposed development upon views to and from Sydney Harbour, public places, landmarks and heritage items, and considered those impacts to be acceptable.
Boat storage facilities	Boat storage facilities are not proposed as part of the Concept Proposal.
Clause 59 - development in the vicinity of heritage items.	Heritage is addressed at Section 5.14 of this EIS and at Appendix E.

5.4.3 Darling Harbour Development Plan No.1

The Darling Harbour Development Plan No.1 (DHDP) is the principal planning instrument applicable to the Harbourside Site. It provides a broad framework for development, principally through identifying permissible uses.

The objectives of the DHDP are to encourage the development of a variety of tourist, educational, recreational, residential, entertainment, cultural and commercial facilities, and to set out those uses which are deemed permissible.

The Concept Proposal is consistent with these objectives.

The Harbourside Concept Proposal will provide a new world class retail and residential building and will provide an opportunity for more people to make use of the existing and proposed recreational, entertainment, cultural and commercial facilities in the precinct.

The Concept Proposal seeks approval for a mix of uses, commensurate with its CBD fringe and relationship with the proposed new world-class convention, exhibition, and entertainment facilities and surrounding educational establishments.

A summary of the permissibility of all aspects of the Concept Proposal and other potential permissible uses under the DHDP is provided with **Table 10** below.

Table 10 – Consistency with Darling Harbour Development Plan No. 1

Component	Darling Harbour Development Plan No. 1	Permissible?
Demolition	Clause 8 of DHDP - the renovation or demolition of a building or work may not be carried out except with a permit being obtained as a permissible use.	Yes
Public domain improvements	Clause 6 (a) of DHDP includes development for the purposes of recreational facilities as a permissible use Clause 6 (c) of DHDP includes development for the purposes of beautifying the landscape as a permissible use. Clause 6 (d) of DHDP – Schedule 1 includes 'parks and gardens' as a permissible use. Clause 6 (e) of DHDP includes development for any purpose incidental or subsidiary to permitted development as a permissible use.	Yes
Retail premises	Clause 6 (d) of DHDP – Schedule 1 includes, 'commercial premises (other than premises used for pawn broking or other forms of moneylending)', 'professional consulting rooms', 'recreation facilities', 'refreshment rooms', 'shops', and 'theatre restaurants' as permissible uses.	Yes
Residential	Clause 6 (d) of DHDP – Schedule 1 includes 'residential buildings' as a permissible use.	Yes
Upgrade and reconfiguration of Bunn Street	Clause 6 (d) of DHDP – Schedule 1 includes 'public utility undertakings' as a permissible use. Clause 6 (e) of DHDP includes development for any purpose incidental or subsidiary to permitted development as a permissible use.	Yes

Component	Darling Harbour Development Plan No. 1	Permissible?
Car parking	Clause 6 (d) of DHDP – Schedule 1 includes 'car parking stations' as a permissible use. Clause 6 (e) of DHDP includes development for any purpose incidental or subsidiary to permitted development as a permissible use.	Yes
Signage e.g. wayfinding, building identification, event signage	Clause 6 (a) of DHDP includes development for the purposes of tourist, educational, recreational, entertainment, cultural facilities or commercial facilities as a permissible use. Clause 6 (c) of DHDP includes development for the purposes of beautifying the landscape as a permissible use. Clause 6 (e) of DHDP includes development for any purpose incidental or subsidiary to permitted development as a permissible use.	Yes
Extension/ Augmentation of infrastructure	Clause 6 (d) of DHDP – Schedule 1 includes 'public utility undertakings' and 'utility installation' as a permissible use. Clause 6 (e) of DHDP includes development for any purpose incidental or subsidiary to permitted development as a permissible use.	Yes

5.5 Land Use Suitability

The Harbourside Site is to be developed for a mix of non-residential and residential uses, including retail and restaurants, residential apartments, and open space. The proposal will add 87,000m^2 of high-quality retail, residential and mixed-use floor space to create a vibrant new destination.

It is clear that the proposed retail and residential uses are permissible under the DHDP.

Despite the permissibility of the proposed uses, it is prudent to examine the appropriateness of the uses given the history, context and future desired character for the Darling Harbour precinct.

5.5.1 Darling Harbour – The History

Darling Harbour is a continually evolving precinct that has adapted to meet the diverse entertainment, cultural, tourist, and recreation needs of Sydney. Prior to the bicentennial revamp of 1988, Darling Harbour went through a period of approximately 150 years of industrial uses. Throughout the decades, the precinct evolved from a bustling market wharf to become a major industrial and goods handling precinct (refer to **Figure 43** below).

Darling Harbour was originally a functioning and successful industrial area that was largely cut off and inaccessible by residents and visitors to Sydney. With the containerisation of freight during the late 1950s and 1960s placing increased demands on wharf space and facilities, a decision was made by the State Government to relocate shipping activities to Port Botany, opening a new future for Darling Harbour.

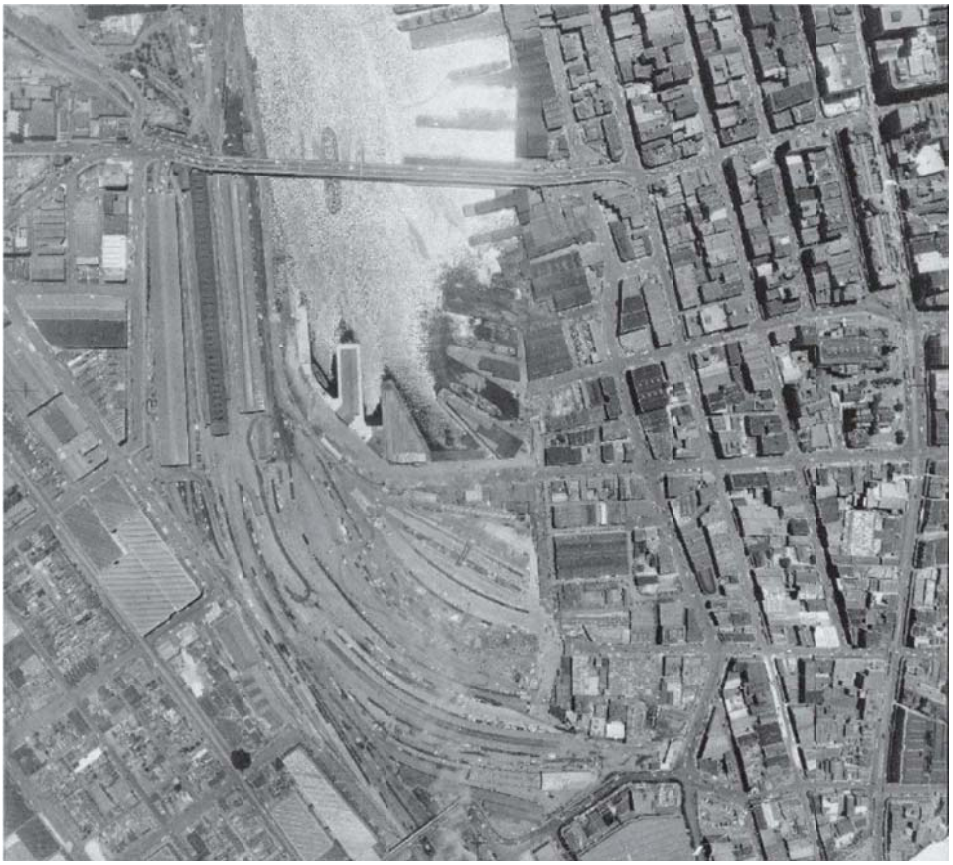


Figure 43 – Darling Harbour Goods Yard in 1949
Source: City of Sydney Archives

Over the next two decades, a new Darling Harbour was created, one which completely reversed the isolated nature of the precinct.

The experience of Darling Harbour is not uncommon when examining case studies of other global cities. During the 1980s, many cities across the world were undertaking rehabilitation of inner city precincts that combined residential, recreational and commercial uses. Major waterfront developments were undertaken in Europe and North America. Amongst the most spectacular were Docklands in London and Battery Park City in New York.

The clear distinction in these cases was that the large urban regeneration of these precincts was undertaken by private rather than public initiatives. Darling Harbour, on the other hand, was a project spearheaded by government agencies to rejuvenate a former underutilised precinct on the edge of Sydney's growing CBD.

The celebrations of the 1988 bicentennial resulted in a further quarter of a century where Darling Harbour was held up as a tourism and entertainment hub within Sydney, and moreover, Australia. With the continuing growth of Sydney on a global scale and the positioning of Australia as a key country within the Asia-Pacific, a new emphasis has been placed on attracting visitors, residents and talent to the city.

In recent years, the built form and public domain of Darling Harbour has become a product of its time. Whilst no longer isolated from the Sydney CBD, the Darling Harbour precinct lost some of its charm and attraction on a world scale, falling behind other international cities such as Singapore and Hong Kong, as well as more local cities such as Melbourne.

This trend has been reversed more recently with the significant investment undertaken by the NSW State Government in the SICEEP project, rebuilding Darling Harbour into a modern, world-class destination to revival any central tourism precinct. Further to this, the NSW State Government has realised the benefits of private industry involvement in significant regeneration projects, and like the international examples of Docklands in London and Battery Park City in New York, a number of private-led developments are now occurring within Darling Harbour on government owned land (including the Harbourside Concept Proposal).

Much like other international examples, a true mixed use precinct and destination cannot rest on its laurels. A successful mixed use outcome seeks to secure a range of all different types of uses, and most importantly, uses which will ensure the longevity of a precinct for more than 25 years, much like the retail, commercial, and residential examples of Docklands in London and Battery Park City in New York.

The recent rejuvenation of Darling Harbour is a reflection of current times. The current development projects, including the SICEEP project, the Ribbon, the Cockle Bay redevelopment, the Star redevelopment and the Harbourside Concept Proposal are all indicators of the change sweeping through Darling Harbour. Whilst late to the realisation that a successful precinct needs a mix of uses, Darling Harbour is now proposed to cumulatively be a place of vibrancy and activity, with the full suite of entertainment, exhibition, convention, retail, restaurant, bar, commercial, hotel, serviced apartment and residential uses.

A new chapter has begun in the story of Darling Harbour. The Harbourside Concept Proposal is an important addition to this chapter, providing a well-rounded range of compatible uses which expand on the existing and proposed uses within the precinct and its surrounds. The specifics of each of the proposed uses and further discussion on the merits of each use is set out further below.

5.5.2 Retail and Residential Uses

The proposed retail and residential land uses are considered to be suitable in the proposed location as they will replace and upgrade the existing retail centre. The uses will provide a range of retail, residential, entertainment and community uses that serve the needs of people who live in, work in and visit Darling Harbour, Pyrmont and Ultimo and the surrounding local area.

The proposed redevelopment of Harbourside will transform Darling Harbour's retail landscape and rejuvenate the local area through the improved accessibility, and a new choice and variety of shops and restaurants.

Providing a variety of retail brands, the Harbourside redevelopment aims to attract the best Australian and International brands which will ensure a first class shopping experience for tourists, workers and local residents. The Harbourside redevelopment will also support Darling Harbour in terms of a leisure destination producing a variety of bars and restaurants which will ensure visitors to Darling Harbour can have a fluid experience.

The proposed new shops and businesses will be a valuable addition to the community that lives and works in the Pyrmont and Ultimo area. The redevelopment of Harbourside will be an innovative place for shoppers, tourists, neighbours and retailers.

The redevelopment of the retail component of Harbourside Shopping Centre will provide a high quality shopping experience for the local community, future residents and tourists, which supports the vision of Darling Harbour as a premier tourist location.

The retail and residential uses will encourage employment opportunities in accessible locations in close proximity to residents in Darling Harbour, Pyrmont and Ultimo and the surrounding local area and is considered to be an appropriate land use.

5.5.3 Residential Land Use

As outlined above the proposal incorporates a residential tower. The residential land use is permissible and suitable in this location as it will support the vitality of the Harbourside Shopping Centre, Darling Harbour and surrounds.

The NSW Government's goal is to deliver the housing that Sydney needs. The Government is working to achieve its target of an additional 664,000 new dwellings by 2031. The residential land use will contribute to achieving this target by 2031 and will provide for the housing needs of the community. The proposal will be providing a variety and different types of housing which will also reduce the pressure on rising house prices.

There is an increasing awareness that our cities are going to be shaped around functionality and connectivity between uses, as opposed to the single dimensions of a system with reliance on the separation of uses. Planning needs to align with this change. Functionality is based on how we use space e.g. infrastructure and activity nodes; whereas connectivity allows us to optimise the distribution of people and goods in and out of spaces. The community is interested in the quality of places, multi-dimensional about function is only once aspect.

The proposed residential tower located above a shopping centre in Darling Harbour provides both functionality and connectivity as it is in close proximity to services, transport nodes, employment and optimises the distribution of people and goods in and out of space. The residential component will add vibrancy by injecting local residents into Darling Harbour and ensure that Darling Harbour supports Sydney as a 24 hour global city.

The residential component will also guarantee that the redevelopment supports a true mixed use precinct. The proposal will enable other land uses that provide facilities or services to meet the day to day needs of residents. The residential use will not undermine the functionality or experience of Darling Harbour as a tourism and convention centre precinct.

A Plan for Growing Sydney outlines that the most suitable areas for significant urban renewal are those areas best connected to employment and include; those in and around centres that are close to jobs and are serviced by public transport services that are frequent and capable of moving large numbers of people; and in and around strategic centres.

The provision of housing in the tower above the retail centre and in close proximity to the city will ensure the proposal is very accessible to jobs and transport. The new housing will complement the jobs located within Darling Harbour, Pyrmont and the city and transport (including the light rail to the rear of the site) as people will be able to live closer to family and friends, to workplaces and schools, and to the services they use on a daily or weekly basis.

The proposed residential use is in a suitable location as it will support the vibrancy and vitality of the Harbourside shopping centre and Darling Harbour, it will provide housing in close proximity to employment, transport and services and will ensure there is a variety and mix of housing types available.

5.6 Design Excellence

A Design Excellence Framework has been developed by JBA on behalf of Mirvac to guide the entire Harbourside redevelopment (refer to **Appendix P**). This framework establishes the process for achieving design excellence from the inception of the project, through to the completion of the detailed development approvals for new buildings.

There are three key steps within the design excellence process, relating to the conceptual development, the Stage 1 Concept Proposal and the future detailed building designs. The key elements of the framework are outlined further below.

5.6.1 Conceptual Development

Mirvac has adopted a two staged process for the conceptual development step of the design excellence framework. Initially, Mirvac engaged Jerde, a world-renowned place-making architect, to provide a high level concept and vision for the redevelopment of the Harbourside Site. Using the outputs of Jerde, Mirvac then engaged the decorated architecture firm, fjmt, to develop a more refined concept for the Site.

5.6.2 Stage 1 Concept Proposal

Continuing from the design work undertaken in the conceptual development step, Mirvac continued with the services of fjmt to refine the built form elements of the proposal. To ensure a quality public domain outcome is also achieve, Mirvac appointed ASPECT Studios, another award winning practice. Together, fjmt and ASPECT Studios undertook further design analysis and refinement to create an appropriate building envelope and indicative public domain concept for the redevelopment.

External pre-lodgement design review processes have been commenced for the Stage 1 Concept Proposal, with the proposal being presented to the SHFA Design and Development Advisory Panel. The Panel provided a number of comments which have been addressed through further refinements of the Concept Proposal. **Table 11** sets out the Panel's comments and how these have been addressed in the proposal.

Table 11 – Assessment of proposal against SHFA Design and Development Panel

SHFA Design and Development Advisory Panel Comment	Response
Public spaces and access	
The improved connectivity into Ultimo/Pyrmont was highly supported and further development and expansion was encouraged.	Noted, a number of pedestrian connections are sought to be approved in-principle through the Concept Proposal, including new connections and revitalised connections. These pedestrian connections, along with the public domain upgrades which will form part of the redevelopment, will stitch the Site back into the fabric of Darling Harbour.
The scheme relies on a pedestrian connection over Bunn Street, which means negotiating access from parties whose NE view will be blocked by the tower.	Noted. The proposed Bunn Street is considered a significant public benefit of the Concept Proposal and will improve east-west links from Pyrmont to Darling Harbour. The position of the proposed residential tower has been refined and a residential use adopted to ensure a slender tower which maximises view sharing, achieving a balanced outcome.
A summary of public benefits should be prepared.	A summary of the public benefits to be delivered through the redevelopment is provided at Section 5.29.

SHFA Design and Development Advisory Panel Comment	Response
Form - building height/envelope/bulk/scale:	
The concept of terracing the building and stepping down to the public domain was supported as was the demolition of the existing development.	Noted. The terraced style form of the podium building has been developed in consultation with surrounding building users to ensure view sharing opportunities are maximised.
The relocation of the tower further south was suggested.	The tower form has been shifted further to the south and developed into a slim and slender residential form, ensuring that view sharing opportunities are maximised. The location of the tower has been identified based on a rigorous and extensive analysis of alternatives.
Consideration to more than one tower with lower heights was suggested.	An alternative option of two low or two taller towers has been explored, as set out in Section 1.4 above. These options, whilst having some merits, were sub-optimal outcomes when compared to the option of a single taller tower form.
Overshadowing from the tower, particularly in relation to public domain including the waterfront, is a significant issue and concern.	The potential for overshadowing on the public domain and water of Cockle Bay was identified early by the project team as a concern. This concern was a key driver in selecting the proposed Concept, with a taller slender tower allowing for a fast moving shadow, and in turn minimising potential overshadowing impacts.
The location of the tower relative to the Pyrmont Bridge was raised as it presents an unsatisfactory relationship.	The proposed tower form has been relocated to the south, remaining in the northern portion of the site, but providing an additional 25m separation to the Pyrmont Bridge. This relationship is considered to be appropriate, with the future detailed design to further enhance the relationship of the podium, tower and Pyrmont Bridge. Section 5.14 explores the potential heritage implications of the Concept Proposal, particularly on the Pyrmont Bridge, with an overall determination that the proposal will enable a positive outcome.
Heritage	
Pyrmont Bridge is one of few heritage items in Darling Harbour, and needs to be reinforced, not diminished, so it reads as a strong, independent historic structure.	As above, the Concept Proposal has allowed for a sensitive and complementary response to the significance of the Pyrmont Bridge. The future detailed design of the podium and tower buildings within their respective envelopes will ensure a positive relationship is created and the Pyrmont Bridge is able to be better celebrated from an enhanced public domain. Refer to Section 5.14 for further discussion.
There is an opportunity to improve the legibility of and the connections to the historic Pyrmont Bridge which needs to be developed.	There will be positive contributions by the future redevelopment on the Pyrmont Bridge, including a greater built form setback; the removal of disused monorail infrastructure; the making good of element of the Pyrmont Bridge and the creation of new publicly accessible areas (such as the podium rooftop) where the Pyrmont Bridge can be viewed from new angles.
The location of the tower relative to the Pyrmont Bridge was raised as it presents an unsatisfactory relationship.	As above, the tower location has been shifted further south and the tower envelope refined to match the more slender and streamlined form of a residential building.
It was suggested the tower could be pushed back to allow for a better design reading of the historic Pyrmont Bridge.	As above, the tower envelope location has been refined to allow for a greater setback to the Pyrmont Bridge. Overall, there are expected to be positive benefits for the Pyrmont Bridge as a result of the Concept Proposal.

To ensure further design review of the Concept Proposal, Architectus has also been engaged by Mirvac to undertake a third-party urban design review. This review (provided at **Appendix C**), has examined the key elements of the design prepared by fjmt and ASPECT Studios, providing a judgement on the appropriateness of design decisions.

Finally, fjmt and ASPECT Studios have collaborated to prepare a set of guiding urban design and public domain principles intended to shape the future detailed development phase (being the detailed building design and public domain design).

5.6.3 Stage 2 DA

The design excellence process will continue through to the Stage 2 DA. The podium and tower elements are proposed to be separately addressed through different processes to ensure design excellence is achieved. The different building elements, both containing different land uses, have specific needs and separate processes will ensure that the best quality design is achieved.

Despite no statutory requirement, the podium element will be the subject of a competitive design process. This process will comprise the invitation of a minimum of three (3) architects, with a competition brief developed in consultation with the Department. The winning scheme will be selected by Mirvac in consultation with external professional representatives.

The design of the tower element will be developed by an executive architect appointed by Mirvac. This executive architect will ensure that there is integration between the podium winning design and the future residential tower.

To ensure independence and design review processes continue to remain in place through development of the design, Mirvac intends to appoint a Design Review Panel (DRP). This DRP will include a panel of suitably qualified and experienced designers and experts in mixed use retail, residential and public spaces. The role of the DRP will be to comment and provide advice prior to the submission of the Stage 2 DA. **Figure 44** below sets out the framework for achieving design excellence at each of these key steps.

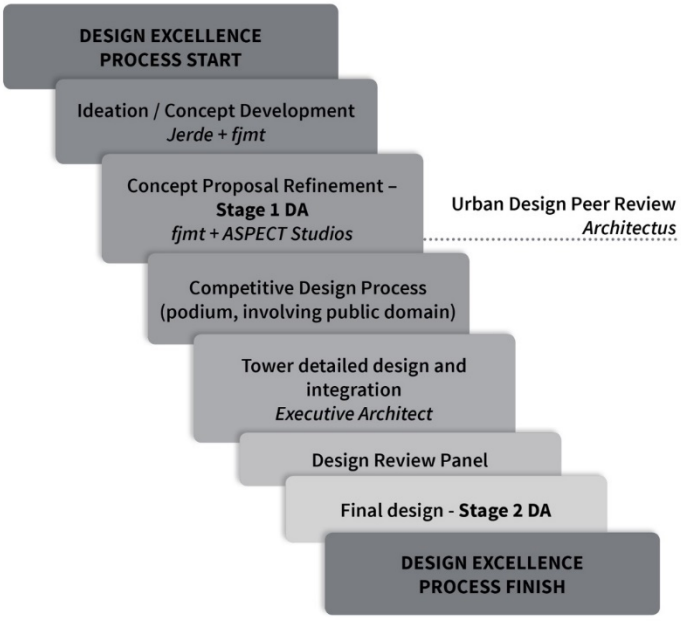


Figure 44 – Design excellence framework
Source: JBA

5.7 Built Form

The DHDP does not provide any development standards for building height, floor space ratio or setbacks within Darling Harbour. Accordingly, the Concept Proposal has been designed to respond to the current and desired future built form of Darling Harbour. The design progression from Jerde to fjmt and Aspect, has allowed for a well-considered and respectful approach to rejuvenating the Site. This design has been reviewed by Architectus to ensure multiple layers of design thinking and review are applied to the Site in preparation for the future detailed development (refer to **Appendix C**).

The Concept Proposal will provide a built form that is responsive to the context and characteristics of the Site, including existing built form, the character of surrounding precincts, the location of the site within a transitional zone on the CBD fringe, and close proximity to public transport. As outlined in Section 1.4, the built form of the proposal has been rigorously analysed over an extensive period of time with the input of surrounding community and business stakeholders.

5.7.1 Building Framework

The following design elements of the street layout and building footprints within the Concept Proposal contribute to the future built form qualities of the site:

- The Concept Proposal adopts the principles of perimeter edge planning, which preserves the amenity of public domain and responds to the City context of the site.
- High quality public domain and landscaping is focussed at the heart of the site, which reinforces its importance in providing amenity benefits.
- The alignment of The Boulevard is contiguous with the site. The Boulevard will provide a strong visual connection between the Harbourside and the wider Darling Harbour Precinct.
- The podium levels and the potential provision of retail uses on lower levels will provide human scale and break up the massing of the built form. The high-rise building will align with the building line, responding to the City context.
- The arrangement of the built form across the site provides good separation, encourages natural ventilation, and maximises solar access and outlook.
- The pedestrian bridge is proposed to provide a direct response to the fine grain development patterns found in the neighbouring Pyrmont precinct. Leading from the western site perimeter to Pyrmont, the bridge creates a point of difference in the urban experience and contributes to a sense of arrival when opening up to Darling Harbour.

5.7.2 Building Height, Bulk and Scale

As illustrated in **Figure 45**, the Concept Proposal responds to the context of the Site's position at the CBD edge, with the Darling Harbour topography and within the context of surrounding buildings. The skyline to which the proposal contributes will be markedly different to that of the Sydney CBD, ensuring that the western portion of Darling Harbour is classifiable as a unique urban setting.

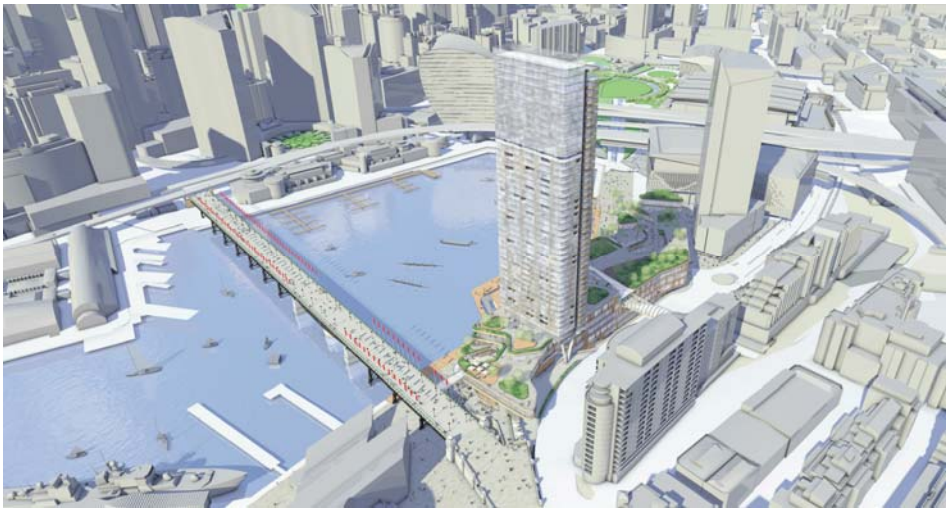


Figure 45 – Indicative Concept Proposal in context
Source: fjmt

The proposed building height will contribute to the creation of a highly functional and aesthetically pleasing mixed use development, and is acceptable for the following reasons:

- The proposed building height is compatible with heights of the existing buildings around the development site, with particular reference to 'The ICC Hotel' building, which provides a vertical benchmark of 35 storeys (RL133.55). The proposal is consistent with the height of the ICC Hotel.
- The proposed height reflects the western City fringe location, and is suitable given the immediate proximity to high capacity mass transit (rail and light rail).
- The layout supports a positive urban design outcome in terms of the interface between built form and public domain.
- The podium level provides an intermediate/human scale, which in turn provides a civic scale, and reinforces the significance of this key component of the public domain.
- The proposed tower is principally oriented to the north to ensure maximum solar access and outlook.
- The proposed tower is provided without a setback from the podium level on the east and west elevation, providing a striking built form that responds to its Global City context.
- The proposed tower is setback from Pyrmont Bridge to the north and from the south to break up the bulk and scale.
- The arrangement of the buildings above podium level provides suitable building separation and maximises solar access and outlook.
- The siting of the proposed tower provides for building separation that aims to support view sharing, and provide privacy and amenity benefits for surrounding residents and future users of the ICC hotel.
- Visual analysis of the proposed built form at Section 5.6.6 demonstrates that the proposed building height is capable of integration into the built form typology of the locality.

The proposed slender tower building above the podium will accord within the vision of Darling Harbour as a diverse area with a mixture of building forms, namely lower scale buildings interspersed with taller towers. As illustrated in Error! Reference source not found. below, the proposed tower will be one a number of tower buildings establishing a natural progression of development around the foreshore of Darling Harbour. Anchoring either end of the harbour are the approved Crown Hotel Integrated Resort tower (to the east) and the proposed Star Hotel/Serviced Apartments tower (to the west). These marker towers at the entrance of the harbour are substantially taller than the proposed Harbourside tower, establishing a hierarchy in building forms, with the tower heights reducing when preceding to the south.

When considered in the evolving context of Darling Harbour, the proposed Harbourside tower is a positive addition to a diverse skyline. The tower will sit comfortably within the scale of maximum building heights established by constructed, approved and proposed towers. Architectus, in their independent review of the Concept Proposal (refer to **Appendix C**), determined a consistent view of the proposal.

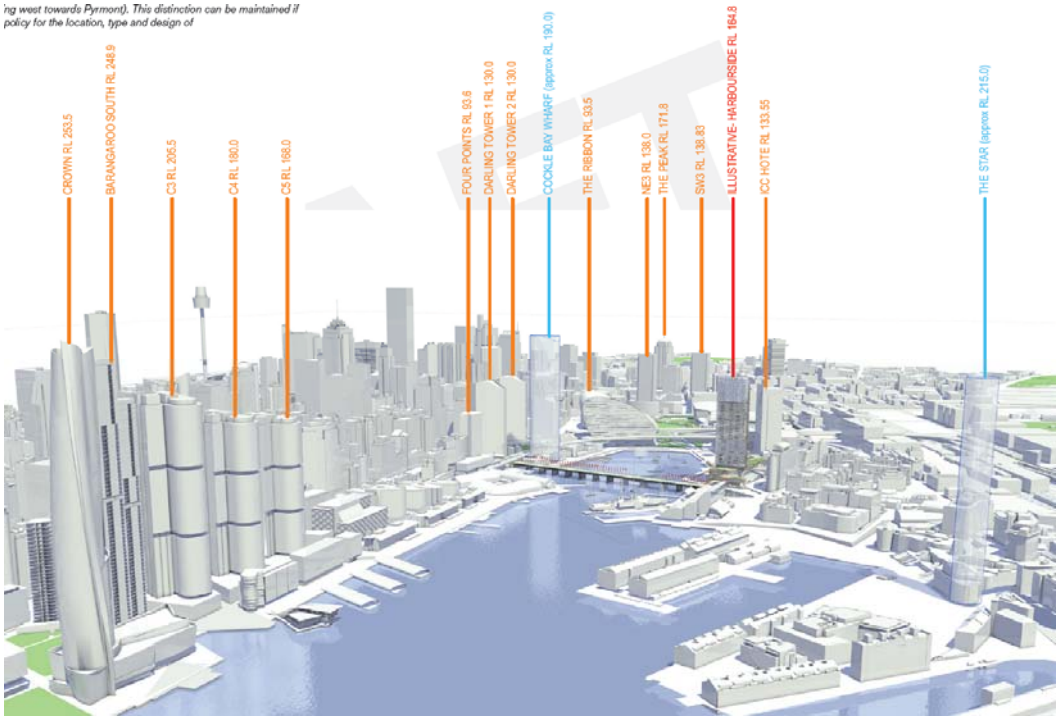


Figure 46 – Tall buildings flanking Darling Harbour
Source: fjmt

5.7.3 Building Separation and Visual Privacy

The Apartment Design Guidelines (ADG) recommends a range of building separation distances depending on the height of residential buildings. The separation distances increase, or are staggered as height increases.

These recommended standards are framed around the objectives of maintaining acoustic and visual privacy; controlling adverse overshadowing impacts; promoting daylight access, and providing for adequate open space and deep soil zones within a site.

The only residential building within close proximity of the Site is No. 50 Murray Street which is setback some 30m, well in excess of the recommended separation within the ADG (refer to **Figure 47**).

The independent review of the Concept Proposal by Architectus determined that the proposed building separation for the podium and tower envelopes would not result in any adverse impacts and would allow for visual privacy for surrounding users and the future residential apartments within the residential tower.

Overall, it is considered that the proposed separation distances are suitable given that Concept Proposal is able to meet the key objectives of the ADG requirement as follows:

- The Concept Proposal minimises overshadowing impacts to key areas of the public domain through the use of podiums and setbacks from the southern end of the site. These break up the scale of development when viewed from key areas of the Public Domain, reducing perceived bulk at the 'human scale'.
- Adequate open space and deep soil zones can be provided across the Site.

Further discussion on the Concept Proposal's consistency with the ADG is set out in Section 5.9.

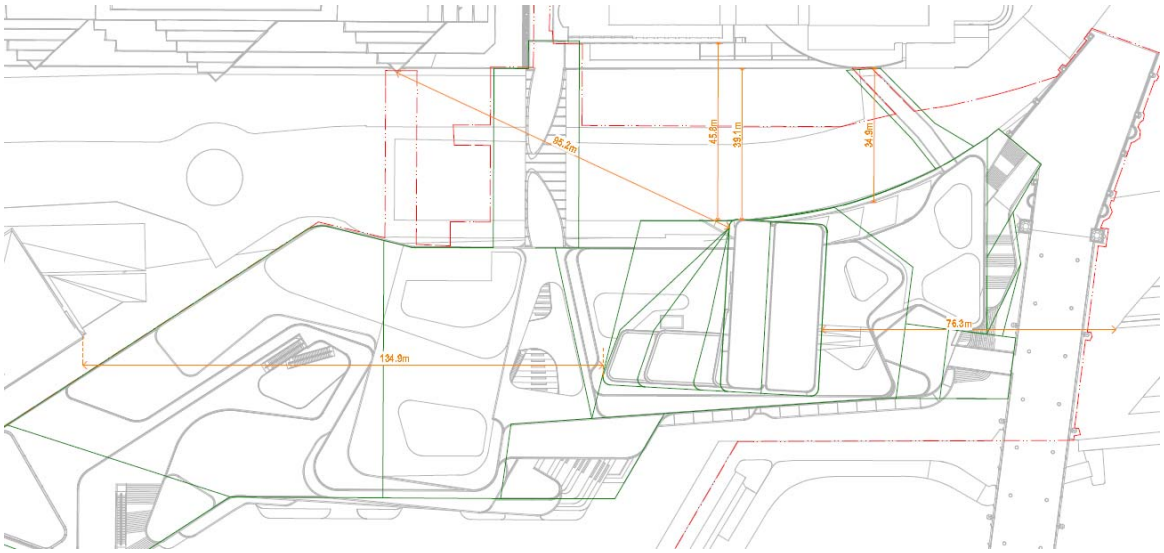


Figure 47 – Minimum separation distances from tower
Source: fjmt

5.8 Visual and View Impact Analysis

A Visual and View Impact Analysis has been prepared by JBA and is included at **Appendix Q**. The methodology for the analysis is detailed within the Report.

To support the visual analysis key public domain views, view corridors and public vantage points within and surrounding the Harbourside site have been identified. Photomontages have been prepared for a total of 15 public domain views and vantage points as illustrated on **Figure 48**.

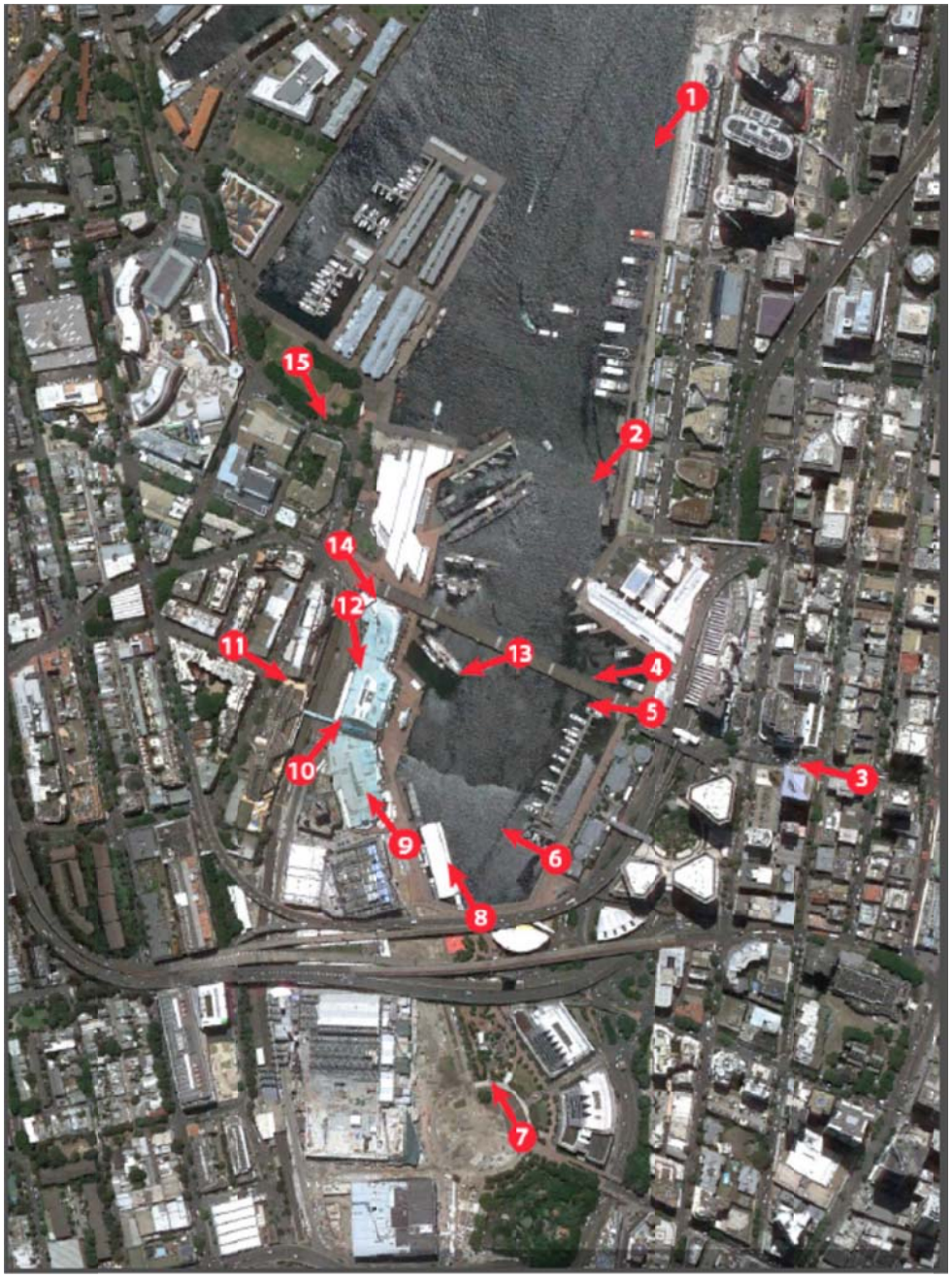


Figure 48 – Visual Analysis (Public Domain Views, View Corridors and Vantage Points)
Source: Virtual Ideas

Eleven (11) key buildings in the vicinity of the Harbourside Site have been identified as being impacted or potentially impacted on by the Harbourside project in terms of private views. These buildings are broadly grouped into primary and secondary buildings:

Primary Buildings

- Novotel Sydney Darling Harbour
- Oaks Goldsbrough Apartments
- Ibis Hotel Darling Harbour
- One Darling Harbour (50 Murray Street)
- Gateway Apartments (1 Murray Street)
- ICC Sydney Hotel (Sofitel)

Secondary Buildings

- Renaissance Apartments (73 Union Street)
- Arena Apartments (32-34 Bunn Street)
- The Phoenix Apartments (117 – 129 Murray Street)
- Harbour's Edge Apartments (1 – 5 Harwood Street)
- 16 – 30 Bunn Street (apartments)

The Site
Key Primary Building
Secondary Building

1. Gateway Apartments, 1 Murray St, Pyrmont
2. Renaissance Apartments, 73 Union St, Pyrmont
3. Harbour's Edge Apartments, 1-5 Harwood St, Pyrmont
4. One Darling Harbour, 50 Murray St, Pyrmont
5. Ibis Hotel
6. Novotel Sydney Darling Harbour
7. The Phoenix, 117-129 Murray St.
8. Oaks Goldsborough Apartments
9. Arena Apartments, 32-34 Bunn Street
10. ICC Hotel
11. Apartments, 16 - 30 Bunn Street

Figure 49 – Key Buildings (Private Views)
Source: Nearmap + JBA

In the planning for the renewal of Harbourside, design emphasis has been placed on the retention and protection of key views and vistas at the street level and generally from or within the public domain from encroachment by the new building forms, and also to the siting and design of the new building in terms of maintaining and opening up views from the public domain to Sydney Harbour. Consideration has also been given to views and outlook available from existing private residences and other adjoining private development.

With respect to the street level public domain:

- existing important views from the public domain at street level to the most significant and highly utilised public domain spaces within and in close proximity to Harbourside are retained;
- existing public domain views to key heritage buildings and places are retained, including Pyrmont Bridge; visual connectivity to other heritage items in the vicinity is not significantly affected by the proposed new built form;
- the proposed new tower element continues with the evolution and change to the low scale character of the western edge of Darling Harbour, providing a new iconic building form that seeks to draw Darling Harbour into the wider CBD by redefining the density and height of development on the western side of Darling Harbour;
- continuous and unobstructed sightlines to the foreshore are maintained to the public, and views to, through and over the site are retained such that the public / pedestrians will continue to enjoy the visual qualities of the harbour and its foreshores;
- the key design principles adopted for the tower will create a strong identifiable form when viewed within the city skyline and at the local pedestrian level;
- the majority of the proposed development footprint is of a low scale form, with the tower carefully positioned having regard to a range of constraints and opportunities;
- the final resolved land use and floor plate size and tower orientation and positioning provides for a new urban dialogue to be achieved on the western side of Darling Harbour that recognises the site's proximity to the Sydney CBD;
- the tower positioning and form avoids a wall of towers fronting Sydney Harbour, and supports ample sky views and a retained sense of openness on this western CBD fringe;
- the continuation of existing streets into site (eg Bunn Street connection) and its connection to an open and inviting rooftop space will establish new sightlines, visual permeability and views and vistas; and
- the creation of the planned new observation deck space in particular will provide a significant new publicly accessible vantage point for people to enjoy views across Darling Harbour and the CBD beyond.

The proposal will not detract from the overall visual connectivity for pedestrians in the public domain nor result in any significant adverse impact. Generally, the affected vantage points are not key places for pedestrians to stop and view the CBD or its skyline, and the wide range of different viewing points available within the Darling Harbour precinct and its approaches will continue to provide for variety and interest in the different views, vistas and sightlines available to pedestrians approaching and moving through the precinct from the north, south, east and west.

Low, medium and high level views of the sky along streets and from public domain places (parks etc.) are retained in a variety of contexts.

With respect to private views:

- The siting and design of the proposal (in particular the tower element) has specifically sought to respond to view sharing principles and to provide for an appropriate outlook from adjoining private development to the greatest extent practicable in a highly urbanised inner city environment.
- The proposal has evolved following extensive options testing, with the chosen form of a low scale podium and single tower positioned within the central northern part of the site allowing for view sharing with surrounding buildings.
- The impacts associated with the proposal (podium and tower elements) are considered to continue to provide for a reasonable 'outlook' from apartments that may nonetheless have a change in 'view', consistent with current planning objectives, strategies, principles and development controls for the CBD which recognise that outlook, as distinct from views, is the appropriate measure of residential amenity within a global CBD context. Outlook is retained from all affected apartments with an appropriate distance separation and with space / daylight provided.
- Whilst the proposed development will result in a reduction in, or loss of, some available private views, appropriate view sharing to existing residents of identified primary and secondary buildings is nonetheless achieved.
- Since the submission of the initial concept for the redevelopment of the site, and following community consultation, significant design evolution for the envelope (podium and tower) has occurred. This skilful design evolution has adopted urban design and architectural principles that have resulted in key improvements in view impacts to adjoining development.
- The reduction in private views and change in outlook is considered reasonable given the Site's highly urbanised location, the close proximity of the developments to each other, existing Site constraints, and the functional requirements that are required to be met in relation to the design of the new building.
- There will be a reduction in views available from, in particular, the lower to mid-rise levels of One Darling Drive, the Ibis Hotel and the ICC Sydney Hotel (lower podium levels only) in certain locations and aspects. This results from the creation of a transformed new retail and residential precinct where there is only currently a low rise building in existence. The interruption of existing private views that are currently unimpeded by any development is inevitable in the context of an urban renewal project and is not unreasonable having regard to the highly urbanised global CBD environment of Sydney within which the land is situated. Notwithstanding, the proposed development has accommodated view sharing between and above buildings, and has sought to retain a combination of water, horizon and CBD skyline views by the positioning of the building footprints and configuration of the public domain connections through the site.
- The reduction in private views resulting from the proposal also needs to be balanced by the new/improved public and semi-public viewing areas within the Site that will provide a benefit to the broader population of Sydney and NSW. The new pedestrian bridge, observation deck and waterfront event stair spaces have been designed to enable visitors to the Site to view out from the Site towards the Sydney CBD and Darling Harbour. The enlarged pedestrian foreshore space also provides substantial benefits in terms of views and pedestrian flows around the harbour.

- In terms of view sharing principles the establishment of new facilities that provide for the broader public community to enjoy the waterfront location of Darling Harbour need to be balanced against the retention of views from the private domain. This is consistent with the aims of the Sydney Harbour REP which articulates that the public good (public views) take precedence over private good (private views) where change is proposed on the harbour or within its foreshores.

It is considered that the proposed Harbourside Concept Proposal achieves a reasonable balance between the protection of private views and the protection of public domain views in the delivery of a new world class high quality retail and entertainment centre catering for local and tourist markets and new iconic residential tower on the foreshore of Darling Harbour.

Taking into consideration the project in its totality, the development proposed is acceptable in terms of visual and view impacts.

5.9 Internal Residential Amenity

The Concept Proposal has been designed to provide a building envelope which will facilitate future dwellings that achieve a high level of internal amenity and outlook.

As outlined in the Design Report provided at **Appendix A**, the illustrative scheme provides a potential development scenario within the proposed envelope that achieves the nine principles of *State Environmental Planning Policy No 65—Design Quality of Residential Apartment Development* (SEPP 65).

An assessment of the illustrative scheme's consistency with the objectives of the ADG is provided in **Table 12** to demonstrate the appropriateness of the proposed tower envelope and residential uses on the Site.

Table 12 – Assessment of the illustrative scheme's consistency with the objectives of the ADG

Design Criteria	Proposal
Part 3 Siting the Development	
3D Communal and Public Open Space	
Objective An adequate area of communal open space is provided to enhance residential amenity and to provide opportunities for landscaping	✓
Design Criteria Communal open space has a minimum area equal to 25% of the site	✓
Developments achieve a minimum of 50% direct sunlight to the principal usable part of the communal open space for a minimum of 2 hours between 9 am and 3 pm on 21 June (mid winter)	✓
3E Deep Soil Zones	
Objective Deep soil zones provide areas on the site that allow for and support healthy plant and tree growth. They improve residential amenity and promote management of water and air quality.	✓
Design Criteria Deep soil zones are to meet the following minimum requirements: Site Area / Minimum Dimensions / Deep Soil Zone (% of site area) Less than 650m^2 / - / 7% 650m^2 – 1,500m^2 / 3m Greater than 1,500m^2 / 6m Greater than 1,500m^2 with significant existing tree cover / 6m	(Capable of consistency) ✓
3F Visual Privacy	

Design Criteria	Proposal
Objective Adequate building separation distances are shared equitably between neighbouring sites, to achieve reasonable levels of external and internal visual privacy.	✓
Design Criteria Separation between windows and balconies is provided to ensure visual privacy is achieved. Minimum required separation distances from buildings to the side and rear boundaries are as follows: Building Height — Habitable rooms and balconies — Non-habitable rooms Up to 12m (4 storeys) — 6m — 3m Up to 25m (5-8 storeys) — 9m — 4.5m	✓
3K Bicycle and Car Parking	
Objective Car Parking is provided based on proximity to public transport in metropolitan Sydney and centres in regional areas	✓
Design Criteria For development in the following locations: 1. on sites that are within 800 metres of a railway station or light rail stop in the Sydney Metropolitan Area; or 2. on land zoned, and sites within 400 metres of land zoned, B3 Commercial Core, B4 Mixed Use or equivalent in a nominated regional centre The minimum car parking requirement for residents and visitors is set out in the Guide to Traffic Generating Developments, or the car parking requirement prescribed by the relevant council, whichever is less. The car parking needs for a development must be provided off street.	✓
Part 4 Designing the Buildings	
4A Solar and Daylight access	
Objective To optimise the number of apartments receiving sunlight to habitable rooms, primary windows and private open space	✓
Design Criteria Living rooms and private open spaces of at least 70% of apartments in a building receive a minimum of 2 hours direct sunlight between 9 am and 3 pm at mid-winter in the Sydney Metropolitan Area and in the Newcastle and Wollongong local government areas.	✓
A maximum of 15% of apartments in a building receive no direct sunlight between 9 am and 3 pm at mid-winter.	✓
4B Natural Ventilation	
Objective The number of apartments with natural cross ventilation is maximised to create a comfortable indoor environment for residents	✓
Design Criteria At least 60% of apartments are naturally cross ventilated in the first nine storeys of the building. Apartments at ten storeys or greater are deemed to be cross ventilated only if any enclosure of the balconies at these levels allows adequate natural ventilation and cannot be fully enclosed.	✓
Overall depth of a cross-over or cross-through apartment does not exceed 18m, measured glass line to glass line.	✓
4C Ceiling Height	
Objective Ceiling height achieves sufficient natural ventilation and daylight access	✓

Design Criteria	Proposal
Design Criteria Measured from finished floor level to finished ceiling level, minimum ceiling heights are: Minimum ceiling height Habitable rooms 2.7m Non-habitable 2.4m For 2 storey apartments 2.7m for main living area floor 2.4m for second floor, where its area does not exceed 50% of the apartment area Attic spaces 1.8m at edge of room with a 30 degree minimum ceiling slope If located in mixed use areas 3.3m for ground and first floor to promote future flexibility of use These minimums do not preclude higher ceilings if desired.	✓
4D Apartment Size and Layout	
Objective The layout of rooms within an apartment is functional, well organised and provides a high standard of amenity	✓
Design Criteria Apartments are required to have the following minimum internal areas: Apartment Type — Minimum internal area Studio — 35m^2 1 bedroom — 50m^2 2 bedroom — 70m^2 3 bedroom — 90m^2 The minimum internal areas include only one bathroom. Additional bathrooms increase the minimum internal area by 5m^2 each. A fourth bedroom and further additional bedrooms increase the minimum internal area by 12m^2 each.	✓
Every habitable room must have a window in an external wall with a total minimum glass area of not less than 10% of the floor area of the room. Daylight and air may not be borrowed from other rooms.	✓
Objective Environmental performance of the apartment is maximised	✓
Design Criteria Habitable room depths are limited to a maximum of 2.5 x the ceiling height.	✓
In open plan layouts (where the living, dining and kitchen are combined) the maximum habitable room depth is 8m from a window.	✓
Objective Apartment layouts are designed to accommodate a variety of household activities and needs	✓
Design Criteria Master bedrooms have a minimum area of 10m^2 and other bedrooms 9m^2 (excluding wardrobe space).	✓
Bedrooms have a minimum dimension of 3m (excluding wardrobe space).	✓
Living rooms or combined living/dining rooms have a minimum width of: 3. 3.6m for studio and 1 bedroom apartments 4. 4m for 2 and 3 bedroom apartments	✓
5. The width of cross-over or cross-through apartments are at least 4m internally to avoid deep narrow apartment layouts.	✓
4E Private Open Space and Balconies	
Objectives Apartments provide appropriately sized private open space and balconies to enhance residential amenity	✓

Design Criteria	Proposal
Design Criteria All apartments are required to have primary balconies as follows: Dwelling Type / Minimum Area / Minimum internal area Studio apartment / 4m² / - 1 bedroom apartment / 8m² / 2m 2 bedroom apartment / 10m² / 2m 3+ bedroom apartment / 12m² / 2.4m The minimum balcony depth to be counted as contributing to the balcony area is 1m.	✓
For apartments at ground level or on a podium or similar structure, a private open space is provided instead of a balcony. It must have a minimum area of 15m² and a minimum depth of 3m.	✓
4F Common Circulation and Spaces	
Objective Common circulation spaces achieve good amenity and properly service the number of apartments	✓
Design Criteria The maximum number of apartments off a circulation core on a single level is eight.	Alternative solution achieved through access to views and natural daylight immediately adjacent to lifts
For buildings of 10 storeys and over, the maximum number of apartments sharing a single lift is 40.	✓
4G Storage	
Objective Adequate, well designed storage is provided in each apartment	✓
Design Criteria In addition to storage in kitchens, bathrooms and bedrooms, the following storage is provided: Dwelling Type / Minimum Area Studio apartment / 4m² 1 bedroom apartment / 6m² 2 bedroom apartment / 8m² 3+ bedroom apartment / 10m² At least 50% of the required storage is to be located within the apartment.	✓

5.10 Public Domain and Landscaping

The Public Domain Design Report has been prepared by Aspect and is included at **Appendix K**. The Public Domain Concept Plan has been prepared in accordance with the SICEEP Design and Public Realm Guidelines, as required by the SEARs.

The revitalisation of the Harbourside development presents an opportunity to transform a tired and out of date waterfront and commercial edge to a vibrant public domain and retail edge with great public benefit. The proposal reconnects the site to its local context of surrounding suburbs of Pyrmont and Ultimo through a series of considered, strategic upgrades and additions to the existing network of circulation, links and open landscape spaces.

The proposal for Harbourside is an extension of the ongoing major transformation projects underway and planned for across Darling Harbour. The proposal promotes improved links to public transport, legibility and porosity of the site, conceptual emphasis on its valley floor location and water edge whilst supporting the ongoing growth and development in the area. Furthermore, the proposal seeks to add an additional layer of activity to the Site and the wider precinct by creating publicly accessible rooftop spaces on the podium. The details of these rooftop terraces will be further refined through the future detailed application(s).

The introduction of a green infrastructural strip along the Boulevard in Harbourside will provide much needed shade to a hard open area. This will also reintroduce a green waterfront typology which is already is already prevalent along Barangaroo, King Street, Wharf and Cockle Bay Wharf creating a unified language along the Sydney Harbour Foreshore. Architectus has provided a critique of the proposed waterfront promenade width, comparing the proposed width to other waterfront areas of Darling Harbour (refer to **Appendix C**). On balance, Architectus has determined that the proposed width is suitable and exceeds widths available elsewhere within Darling Harbour.

Maximising of connections to Harbourside is seen as vital to enhance the tourist experience of the harbour. In turn, this will help diversify and connect cultural and retail programmes along the foreshore, and offer much need public domain and amenities to surrounding local neighbourhoods such as Pyrmont and Darling live precinct.

The structure of the proposed design strategy involves the formation of six consolidated public open space components; activated through the inclusion of social and green infrastructure and the interface between one and another. The potential of the proposed public domain enhancements, including the publicly accessible podium rooftop, is illustrated at **Figure 50**.

Figure 50 – Illustrative podium rooftop and public domain treatments
Source: fjmt

5.11 Solar Access and Overshadowing

Shadow Diagrams of the proposed design are included at **Appendix A**. These diagrams illustrate the potential overshadowing impacts resulting from the maximum proposed building envelopes.

There are no overshadowing controls applicable to the proposed development, however the Sydney DCP 2012 is applicable elsewhere in the Sydney LGA and prescribes the following:

- A minimum of 70% of dwellings adjacent to the proposed development must achieve a minimum of two hours direct sunlight between 9am and 3pm on 22 March and 21 June on to at least 1m^2 of living room windows and a minimum 50% to private open space.
- New development must not create any additional overshadowing onto a neighbouring dwelling where that dwelling currently receives less than 2 hours direct sunlight to habitable rooms and 50% of the private open space between 9am and 3pm on 21 June.

Whilst the Sydney DCP 2012 does not apply to the proposal, it can be used for guidance purposes. The expected shadow cast by the Concept Proposal on surrounding residential apartments has been assessed in the Design Report at **Appendix A**. The closest residential apartment building is 50 Murray Street, opposite the Site on Darling Drive. This building currently receives low levels of solar access on 21 June (the winter solstice), due to its orientation and positing of surrounding buildings. An assessment of the potential overshadowing impacts of the Concept Proposal on 50 Murray Street indicates that there will be minimal change in the level of solar access received to existing apartments on the winter solstice (refer to **Figure 51**).

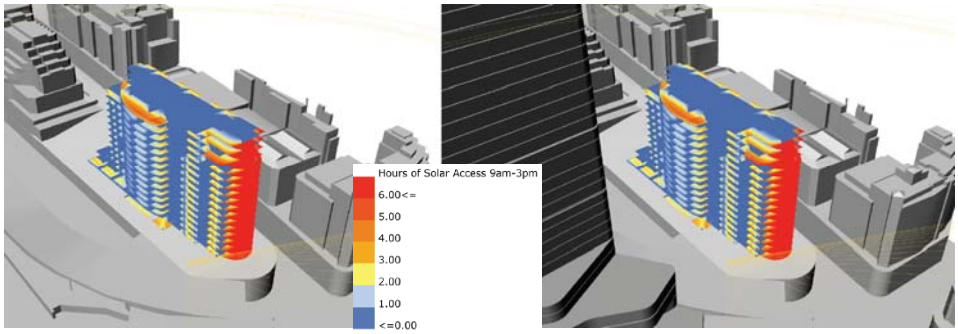


Figure 51 – Solar analysis of 50 Murray Street on 21 June between 9:00am and 3:00pm
Source: fjmt

The shadow diagrams provided at **Appendix A** indicate that when compared to the existing situation, the proposal will result in some additional overshadowing of the public domain of Darling Harbour and water of Cockle Bay. This overshadowing over Cockle Bay is limited in part to a fast moving slender shadow reflecting the form of the proposed tower envelope.

The public domain located to the east of the Site and more broadly within Darling Harbour will be provided with direct sunlight throughout the morning period on June 21 (the winter solstice), before shadow resulting from the proposed tower occurs after midday. Shadow from the podium envelope is then expected to fall on the waterfront promenade during the afternoon period. An area of shadow will also fall on the southern portion of the Darling Harbour waterfront as a result of the tower envelope from 1:00pm onwards.

Overshadowing of this waterfront promenade during the afternoon period on the winter solstice would be expected with any reasonable built form outcome on the Site, given the proximity of the promenade on the eastern side of the building form. The overshadowing expected to result from the tower envelope is restricted to a small proportion of the overall Darling Harbour public domain, with a significant area of waterfront public domain still within direct sunlight between 1:00pm and 3:00pm on the winter solstice.

The Concept Proposal represents a maximum building envelope for the future podium and tower development. The detailed designs of the building will be contained within the proposed maximum envelope, ensuring that any potential overshadowing impacts are minimised from those being considered within this assessment.

On balance, the proposal is considered to be acceptable as generally unimpeded solar access is available within the immediately surrounding Darling Harbour precinct for a reasonable amount of time, being the entire morning period, on the winter solstice. Whilst some overshadowing will occur, this level of overshadowing would be expected with any reasonable built form outcome on the Site and any shadow over the waters of Cockle Bay is fact moving and slender. Overall, the Concept Proposal ensures that there are still vast areas of sunlight available for the enjoyment of the public.

5.12 Transport and Accessibility

Arcadis has prepared a Transport and Traffic Impact Assessment Report (TTIA), which is included at **Appendix R**. The Assessment has been prepared to fulfil the requirements of the SEARs and is in accordance with the NSW Long Term Transport Master Plan and the RMS Guide to Traffic Generating Developments. The comprehensive assessment presents a summary from a study completed around the Harbourside development and also draws upon a number of previous studies prepared on behalf of the NSW Government.

5.12.1 Traffic Generation

The estimated peak hour traffic generation potential of the future development has been based on the Roads and Maritime (RMS) Guide to Traffic Generating Developments 2002, with updated survey data from 2010-2012.

The residential component of the project is considered to generate a higher AM peak generation, while the retail component is likely to generate peak traffic volumes which potentially coincide with the PM network peak (weekdays) and midday peak on weekends.

Arcadis advise that the above trip generation rates assume that each land use is independent of the other, however, the incidence of linked and multi-purpose trips will reduce the predicted trip generation.

The traffic generation rates and trip discounts expected by Arcadis for the Concept Proposal are set out in **Figure 52**.

Land Use Category	Area	Gross Traffic Generation (AM/PM)	Discount	Net Traffic Generation (AM/PM)	AM Peak Generation	PM Peak Generation
Residential	35,000 GFA	69/55	20%	55/44	14 In / 41 Out	26 In / 17 Out
Net Retail[1]	Net 5,000[1] m^2 GFLA	314/314	25%	236/236	142 In / 94 Out	118 In / 118 Out
Total peak hour generation					155 In / 136 Out	144 In / 135 Out

Figure 52 – Trip Generation Potential
Source: Arcadis

Traffic generation for the SICEEP development, given its prominence within the precinct, has been estimated by Arcadis based on the future accommodation potential of the proposed individual facilities.

An assessment was undertaken on the future traffic generation attributed to the whole of precinct, including the redevelopment of the Harbourside Site and the SICEEP development, and the resulting impacts to the key intersections. For the purpose of this assessment, a future scenario has been assessed taking into account the cumulative impact of the operations of both the Harbourside and SICEEP developments.

The results of the intersection modelling indicate that the Harbourside development will result in the key intersections performing at an acceptable level of service on a typical Friday or Saturday PM peak.

An assessment of future key intersection performance was undertaken by Arcadis using SIDRA modelling (where a Level of Service rating is given based on performance). Refer to **Figure 53**.

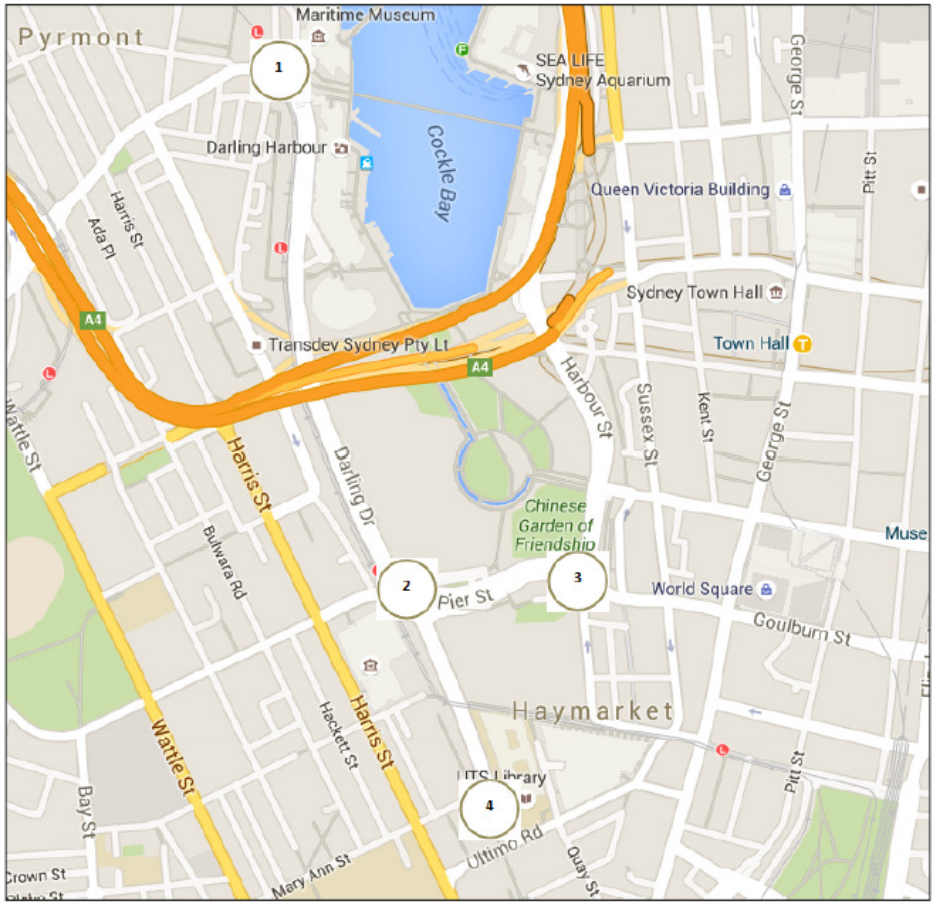


Figure 53 – Traffic survey locations
Source: Arcadis

Overall, the results indicate:

- The overall performance of the intersections are maintained in and close to "status quo" and hence, no adverse impact on intersection performance is expected from the development; and
- There is no significant impact on the key intersections adjoining the Harbourside development for the peak periods investigated and assessed.

5.12.2 Car Parking

The provision of car parking across the Site has been carefully considered to ensure it supports sustainable initiatives/transport measures that encourage the uptake of non-car mode transport and reduce dependency on private vehicles. The proposed development will provide a total of approximately 295 car parking spaces in the basement levels.

5.12.3 Servicing and Loading

A new drop off facility is proposed off the existing Darling Drive up-ramp, that will provide car, taxi and coach drop off facilities for the Harbourside Development. This facility will be designed in accordance with best practice road design guidelines and it will be DDA compliant. This facility will reduce congestion in the surrounding streets by minimising the dependency of private vehicles and improve safety for people utilising the site.

The proposed loading dock will also be access off the access road from Darling Dive roundabout, it is anticipated that the proposed loading dock will cater for the following:

- 2 x LRV bays;
- 7 x MRV bays;
- 2 x SRV bays; and
- 4 x service vehicle bays.

Consultation with the relevant stakeholders will be undertaken during the future detailed development phase(s). Arcadis has recommended that a loading dock management plan is developed by the operator at the relevant stage of the project.

5.12.4 Pedestrian Network

The proposed pedestrian network builds on the initiatives introduced with the adjacent SICEEP development mainly consisting of the main boulevard that will be up to 20m wide (at the southern and middle sections of the Site) and (14m at the northern end) and will have sufficient capacity to cater for peak pedestrian demand anticipated during events at the precinct. The boulevard will provide the main linkage from the south between Chinatown and Darling Square in Haymarket, Darling Central and Bayside within the SICEEP development and the Harbourside development and Cockle Bay to the north.

Pedestrian links to the west of Harbourside will be upgraded, revitalised and improved by the new pedestrian bridge connection from the Harbourside development to Bunn Street in Pyrmont. The proposed Bunn Street connection provides a simple access for pedestrians in the Bunn Street catchment and has a broader connectivity benefit for Darling Harbour and Pyrmont. The new pedestrian link will consider all relevant height stratum associated with the light rail catenary infrastructure.

The proposal will maintain Pedestrian connectivity with the CBD to the east via the existing Pyrmont Bridge. Access to Pyrmont Bridge from the boulevard will be enhanced by the provision of new steps adjacent to the bridge and the northern edge of the proposed podium. This will enhance the overall pedestrian connectivity surrounding Cockle Bay.

Arcadis has recommended the following in regards to pedestrian enhancements through the future detailed design stage(s):

- the proposed pedestrian routes should be enhanced through wayfinding and signage to facilitate connectivity in all directions; and
- interfacing/connecting with the external pedestrian network outside the Site is required to enhance the accessibility of the Harbourside Site and further strengthen linkages with public transport.

5.12.5 Cycle Network

The proposed cycle network will be consistent with the existing cycle network together with the improved network provided with the SICEEP Development.

The proposed cycle access for the Harbourside development will include the Darling Drive cycle network and the internal cycle route within the Darling Harbour Precinct via Tumbalong Park. Access to the development will be enhanced at key entry points for cyclist with facilities provided where necessary.

Bicycle parking facilities will be confirmed during the detailed design stage(s) of the proposal and will consider the Planning Guidelines for Walking and Cycling.

5.12.6 Light Rail

The Harbourside development is expected to introduce additional patronage for the light rail adjacent to the development. The proximity of the Harbourside development to Pyrmont Bay and Convention Centre Light Rail station is anticipated to further encourage public transport usage among the future staff and visitors to the Harbourside. Data from the journey to work data set revealed that approximately 60-65% currently use public transport (train, bus and ferry).

With the completion of the construction of the adjacent developments in the SICEEP, service frequency of the light rail is anticipated to improve to every 5 minutes initially during the peak hour but is also forecasted to eventually be operating at this frequency for the whole day. The increased service frequency is expected to provide additional capacity to cater to the increased demand in light rail ridership.

5.12.7 Ferry Operations

The Harbourside development is expected to introduce additional patronage for the Ferry Services adjacent to the development. There are planned upgrades for the ferry wharves and ferry services as part of the NSW Government's Transport Access Program. The Pyrmont Bay Wharf is included in the wharf modernisation program.

In the Sydney Ferries Future document of the NSW Government, it is also stated that there is an opportunity to link the Rose Bay/Watsons Bay route as part of a cross harbour service to Pyrmont and by extending to Manly in the off-peak weekdays and on weekends, as part of the expansion of services to provide for growth.

With the planned upgrade of the Pyrmont Bay Wharf, it is anticipated that additional capacity will be available to cater to any increase in ferry usage and patronage at the wharf. This improvement will benefit the Harbourside development and encourage additional patronage in the future.

5.12.8 Mitigation Measures

Arcadis has provided the following mitigation measures to be further explored in the detailed design stages(s):

Pedestrian

- the proposed pedestrian routes should be enhanced through wayfinding and signage to facilitate connectivity in all directions; and
- interfacing with the improved external pedestrian network will enhance accessibility of Harbourside and further strengthen linkages with public transport.

Travel Demand Management

- the development of a Travel Management Plan should be investigated in the detailed design stage(s) of the development.

5.13 Accessibility

An Access Review of the Concept Proposal has been prepared by Morris Goding Accessibility Consulting (MGAC) and is included at **Appendix T**. The report makes an assessment of proposal in terms of delivering equality, independence and functionality to people with disabilities, against the requirements of applicable Australian Standards, the Building Code of Australia, the Federal Disability Discrimination Act (DDA), and the DDA Access Code 2010 – DDA (Access to premises – Buildings) Standards 2010. MGAC have assessed the individual components of the design based on the indicative layout included in the Design Report prepared by FJMT (see **Appendix A**).

The developed design of the new public domain areas, residential tower and shopping centre will provide a consistent accessible environment through detailed design and planning of integrated accessible network of paths of travel. This will include the provision of appropriate continuous accessible paths of travel, circulation areas, way finding signage, lighting, seating, handrails, stair, ramps, lift accessible services, car parking, accessible and ambulant toilet facilities and amenities and accessible pedestrian links in accordance with the DDA Premises Standards.

The future shopping centre design will have accessible entry points from the accessible public domain. The provision of lift access in the future detailed design will provide continuous accessible paths of travel from ground floor retail area to all upper floor retail areas. All retail tenancies are expected to have an accessible path of travel within the shopping centre as well as retail tenancies that from the public domain.

MGAC note that the Concept Proposal indicates that accessibility requirements pertaining to site access and common area access can be readily achieved. The development is capable of providing continuous accessible paths of travel for people with disabilities, and have determined that the indicative built elements demonstrate an appropriate degree of accessibility.

Mitigation Measures

Subject to the mitigation measures detailed in the Access Review being adopted, the MGAC conclude that compliance with statutory requirements can readily be achieved as part of the future detailed development on the Site. MGAC advise that they will work with the project team as the scheme progresses to ensure appropriate outcomes are achieved in building design and external domain design.

5.14 Non-Indigenous Heritage

A Statement of Heritage Impact (SoHI) has been prepared by Curio Projects (see **Appendix E**) to assess the potential impacts the proposed development will have (if any) on the overall significance of Darling Harbour within its broader setting; significant built heritage items, including Pyrmont Bridge, archaeological resources including both Aboriginal and historical and any other relevant related heritage risks identified.

Curio Projects Architects' report follows the general guidelines for Statements of Heritage Impact set out in the NSW Heritage Manual and has been prepared in accordance with '*Assessing significance for archaeological sites and relics'* Heritage Branch 2009; *Heritage curtilages* Heritage Council Guideline, Heritage Office, Department of Urban Affairs and Planning, 1996, *Design in Context - guidelines for infill development in the Historic Environment* Heritage Office /RAIA 2005 , the ICOMOS '*Burra Charter*', and the SEARs.

The SoHI identifies the following heritage items as being located within the vicinity of the Site:

- Pyrmont Bridge is listed on the State Heritage Register and is located directly to the north of the site;
- The Darling Harbour Rail Corridor is listed on the Sydney Harbour Foreshore Authority Section 170 Register;
- Water cooling System;
- Manifold; and
- Darling Harbour Water Feature.

5.14.1 Potential Impacts of the Concept Proposal

The proposed Concept Proposal will result in major changes to the existing built form on the Site, and therefore has the potential to impact upon the setting of heritage items within its vicinity. Curio Projects have assessed the potential impacts to specific heritage items as follows:

Visual Impacts

The SoHI finds that the redevelopment of the Harbourside Site will create some visual impacts to Pyrmont Bridge.

The placement of the tower adjacent to the western approach of Pyrmont Bridge will change the aesthetic of the modern backdrop to Pyrmont Bridge, but will not detract from the actual reading of the bridge in its harbour setting when viewed from key public spaces in and around the harbour.

In terms of the location of the tower, it was important to create a balanced relationship between the ICC Hotel and the proposed new residential tower. Together the towers complement, rather than compete, with the visual significance of the bridge.

It is considered that the towers will have enough separation to balance each other out within the Darling Harbour setting, ensuring that views and vistas to the Pyrmont Bridge can be retained.

The removal of the structures associated with the disused monorail will also have a positive impact as the removal of these intrusive elements will recover significant views and vistas to the bridge from the immediate surrounds including towards the undercarriage, trusses and sandstone elements (refer to **Figure 54**).

Figure 54 – Former Harbourside monorail station impacting on views of Pyrmont bridge
Source: Curio Projects

The introduction of the Harbourside development will visually impact direct views of the bridge from the western boundary of the site and some south-west locations within the site and surrounding areas. Curio Projects note that the partial obstruction of current views and vistas to Pyrmont Bridge from within the immediate western and south western areas of Darling Harbour have been minimised due to the setback from the bridge of the tower and the podium. The angling of the tower to increase views from directly behind the tower is also positive.

The setback of the tower and podium reduces the overall visual impact of the Harbourside development on the readability of the bridge by creating a clear separation between the bridge and the surrounding development at the approaches to the bridge.

The creation of open, terraced public domain spaces around the bridge, accompanied with the setbacks proposed, will help to provide a transition in scale and provide a buffer between the heritage fabric of the bridge and the proposed development.

Furthermore, there will be new opportunities for users of the Site to appreciate the industrial and technical nature of the bridge. There will be an improved connection between the public domain and this section of the bridge fabric, allowing for the aesthetic qualities of the bridge to be better viewed and interpreted. The overall setbacks of the Concept Proposal from the Pyrmont Bridge are illustrated in **Figure 55**.

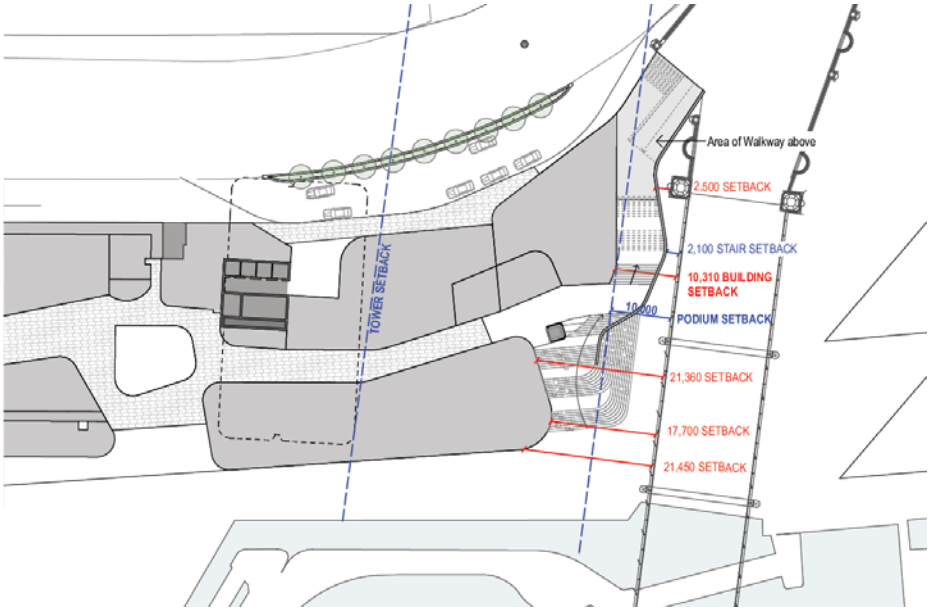


Figure 55 – Indicative proposal setbacks and terracing from Pyrmont Bridge
Source: fjmt

The introduction of the publicly accessible observation deck within the podium will provide opportunities for visitors to Darling Harbour to engage with uninterrupted views and interpret the historical context of the Pyrmont Bridge within its harbour setting, as well as views to the Darling Harbour Rail Corridor and water feature. This benefit will be further enhanced by the consolidation of the pedestrian access to the site via a Bunn Street pedestrian bridge linking Pyrmont to Darling Harbour, which will allow for interpretive opportunities within the design of the overpass.

The potential impact of the proposal on the Pyrmont Conservation Area and the 12 items identified as having local significance will be minor as the proposed residential tower will be consistent with the Darling Harbour and CBD context. The views from towards Pyrmont are already obstructed by existing developments, with the new development proposed on the eastern side of these existing buildings.

The Concept Proposal includes new conceptual pedestrian walkways. The future walkways will have a minor impact on non-original fabric of Pyrmont Bridge including balustrades and decking. To offset these impacts, it is intended to make good the surfaces of the Pyrmont approach to the bridge and improve the readability of the bridge trusses and undercarriages from nearby public domain spaces.

To ensure there will be minimal impact to the State Significant Water Cooling System and Manifold located below ground level at the southern end of the Site, the placement of the tower and associated basement parking at the north-western end of the site is optimal.

Whilst the SoHI acknowledges that views to Pyrmont Bridge will be affected by the building envelope proposed in the Concept Proposal, this is considered acceptable by Curio Projects given the context of the Harbourside Site and the benefits of the overall proposal.

5.14.2 Mitigation Measures

In order to mitigate any impacts to surrounding heritage listed items, Currio Projects suggest the following mitigation measures:

- The new shopping centre should be designed with many green spaces that open up views to the harbour, Pyrmont Bridge, the city and its surrounds.

- The development of the tower design should seek to provide sensitive design solutions for the interface between the Pyrmont Bridge and access to the shopping centre.
- The final form, design and materials of the tower will need to create a sympathetic background to Pyrmont Bridge.
- The proposal to improve the spaces in and around the Pyrmont Bridge approach, and possible bridge surface works, are to be further developed and encouraged as part of more detailed designs. In particular, the proposal to remove the intrusive remnant monorail fabric.

5.15 Archaeology

5.15.1 Indigenous Archaeology

An Aboriginal Archaeological Assessment Report has been prepared by Curio Projects Pty Ltd in accordance with the Office of Environment & Heritage (OEH) Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales, and the SEARs.

Archaeological Background

A search of the Aboriginal Heritage Information Management System (AHIMS) database has been undertaken on 8th February 2016, and returned 20 results within approximately 2km of the study area. The most common site type registered in the area is Potential Archaeological Deposit sites, followed by Artefact sites,

Research into archaeological investigations undertaken in proximity to the current study area indicate the types of archaeology that may survive in the area, and the environment that has allowed it to it is noted that archaeological deposits were encountered during excavation works for then nearby 'Darling Walk' development. These deposits comprised a midden with charcoal and ten artefacts (eight chert, one silicrete, and one quartz).

While the Darling Quarter site was, similarly located to the current study area, along the original shoreline of Cockle Bay (excavation of which recovered an Aboriginal shell midden site with Aboriginal stone artefacts), the Darling Quarter site lay closer to the head of the cove, along the eastern side of the bay, and immediately adjacent to a documented, relatively undisturbed area of the Gymea soil profile. Conversely, the current study area is located along the western shoreline of Darling Harbour, adjacent to the sandstone peninsula of Pyrmont, and in conjunction with mapped disturbed soil profiles.

Therefore, while the study area is likely located right at the edge of what once would have been the original shoreline, land reclamation processes would have removed, covered or disturbed all Aboriginal cultural deposits, were they once present at this location. In addition, it is likely that the majority of the study area, overlapping the mapped area of original shoreline of Darling Harbour, would have been a swamp and estuarine environment that would not have been suitable for human occupation.

Therefore, assessment of the environmental and archaeological context of the study area has determined that there is low to no potential for in situ Aboriginal archaeological deposits to be present within the study area.

Given these previous finds in the locality, it is anticipated that sub-surface aboriginal archaeological deposits may be encountered, particularly along the original shoreline (located in the western portion of the Haymarket Site).

Comber Consultants also note that a complex aboriginal archaeological deposit was previously encountered nearby at the site bounded by Napoleon, Sussex, Erskine and Kent Streets. This suggests that deposits may also be encountered in former tidal zones.

It is not anticipated that deposits will be encountered elsewhere in the site, given that this is reclaimed land.

Mitigation Measures

In order to mitigate any impacts to potential aboriginal archaeological deposits, Currio Projects suggest the following mitigation measure:

> *Should unexpected finds such as Aboriginal stone artefacts or shell middens be located during development, work should cease in the immediate vicinity of the find and the project archaeologist notified in accordance with an unexpected finds protocol established for the site.*

5.15.2 Non-Indigenous Archaeology

A Non-Indigenous Archaeological Assessment and Impact Statement has been prepared by Curio Projects and is included as **Appendix F**. The Statement conforms to the Heritage Branch, Office of Environment and Heritage guidelines for Archaeological Assessments, and has been prepared in accordance with the SEARs. The Statement identifies non-indigenous archaeological items within and in the vicinity of the Harbourside Site.

Archaeological Background

The Harbourside Shopping Centre site has been subject to three primary phases of historical development: Phase 1 (1788–1874)—relating to the early European occupation of the site, and is characterised by the intensification of the use of the natural foreshore for a range of purposes that is likely to include domestic occupation, commercial enterprise and industrial activities. Phase 2 (1874–1960s)—relating to the development and operation of the Darling Harbour Goods Yard, including successive stages of land reclamation, construction of goods sheds, jetties and associated infrastructure. Phase 3 (1960s–present)—relating to the closure of the Darling Harbour Goods Yard, including the demolition of the Goods Yards and construction of the extant Harbourside Shopping Centre

Curio Projects note that the Harbourside site has the potential to include archaeological remains that would illustrate many aspects of the evolution of Darling Harbour from the 1788s to the present day. The report outlines that the Harbourside site has been subject to three primary phases of historical development:

Phase 1 (1788–1874)—relating to the early European occupation of the site, and is characterised by the intensification of the use of the natural foreshore for a range of purposes that is likely to include domestic occupation, commercial enterprise and industrial activities.

Phase 2 (1874–1960s)—relating to the development and operation of the Darling Harbour Goods Yard, including successive stages of land reclamation, construction of goods sheds, jetties and associated infrastructure.

Phase 3 (1960s–present)—relating to the closure of the Darling Harbour Goods Yard, including the demolition of the Goods Yards and construction of the extant Harbourside Shopping Centre. In light of this, it is anticipated that archaeological remains of a number of significant items may potentially be present on the Site.

An assessment of the potential archaeological remains has been carried out in accordance with the NSW Heritage Branch (now called the Heritage Division) guidelines Assessing significance for archaeological sites and 'relics'. This guideline defines significance as 'an expression of the cultural value afforded a place, site or item'.

Curio projects note that there is moderate potential for archaeological resources associated with the Phase 1 occupation and commercial/industrial use of the original intertidal zone, particularly activities that postdate the 1840s.

This archaeological evidence is likely to primarily be of local significance, depending on its nature, extent and integrity. Whilst there is nil-low potential for pre-1844 archaeological evidence to exist on site - if present, archaeological evidence of the early (pre-1844) use of the site's foreshore zone may be of State significance.

There is high potential for physical evidence of land reclamation undertaken to expand the Goods Yard during Phase 2 to survive at the site, including reclamation deposits and sea walls. Archaeological evidence of these features is likely to be of local significance. There is moderate potential for archaeological remains of the Goods Yard to survive. This physical evidence is likely to be limited to some structural remains including foundations of sheds and other structures, and footings of other infrastructural elements. This evidence would be unlikely to meet the threshold of local significance, and would be unlikely to be considered relics

The Assessment concludes that there is potential for substantial non-indigenous archaeological impacts as a result of the Concept Proposal. However, it is noted that the likely impacts are only indicative at the Concept Proposal stage and appropriate mitigation measures can be put in place. These mitigation measures will be further developed during the detailed design of the Stage 2 DA(s), when the true impacts of the proposal will become clearer.

Mitigation Measures

In order to minimise impacts to known and potential archaeological resources the following mitigation measures have been suggested by Curio Projects:

- Any impacts to archaeological relics of local or State significance associated with the redevelopment of the Harbourside Site should be managed in accordance with NSW Heritage Division guidelines to ensure historical archaeological best practice is adhered to.
- An Archaeological Research Design for the Site should be prepared once the impacts on the potential archaeological research are finalised.
- Analysis of additional site information including geotechnical data, when available, and service plans should be undertaken to refine the understanding of archaeological potential.
- Comparative analysis of similar archaeological sites in the vicinity of the subject site should be undertaken as part of the preparation of an Archaeological Research Design.

5.16 Wind Impact

A Wind Impact Assessment for the Concept Proposal has been carried out by Cermak Peterka Petersen (CPP) and is included as **Appendix U**. The report is qualitative, and draws conclusions based on the prevailing wind conditions.

CPP has found that qualitatively, integrating the expected directional wind conditions around the site with the wind climate, the wind conditions at the majority of locations around the Site would be classified as suitable for pedestrians standing or walking under the Lawson criterion from a comport perspective and pass the distress criterion. The report also finds that at windier locations along the waterfront public domain, the wind conditions are likely to be classified as suitable for pedestrian walking.

All locations are expected by CPP to meet the distress criterion with the potential exception of the north-west tower corner, where specific mitigation measures in the future detailed DA(s) will be able to resolve any potential issues.

CPP has noted that without localised amelioration to create local calm areas, the podium roof would be more exposed but can be classified as suitable for pedestrian standing, with locations close to the tower expected to rate as suitable for walking or business walking. Further specific mitigation measures will be developed along with the design in the future stages of the project.

The Wind Impact Assessment concludes that wind conditions around the site for the Concept Proposal are generally expected to be similar to the existing conditions, with windier locations close to the tower if not appropriately mitigated. It is considered by CPP that the proposal would meet the intended use of all spaces for pedestrian comfort and safety.

Mitigation Measures

CPP notes that the strength of the conditions in identified windier locations will depend on the final architectural form of the tower and other structures, and will need to be confirmed through wind tunnel testing as part of the Stage 2 DAs. CPP concludes that a range of mitigation measures can be implemented to reduce the potential wind impacts including awnings, fins and landscaping. Such measures, where required, will be detailed within the future Stage 2 DAs.

5.17 Noise and Vibration

A Noise and Vibration Assessment has been undertaken by Renzo Tonin & Associates (refer to **Appendix M**). The report outlines the relevant considerations for the Stage 2 DA(s) including relevant criteria and assessment methods.

The Noise and Vibration Assessment provides a preliminary review of the Site and surrounds and identified primary locations which are considered to be sensitive with regard to potential operational noise include, but are not limited to:

- Residential / Hotel Receivers including 50 Murray Street, Novotel and Ibis Hotels and International Convention Centre Hotel (currently under construction).
- Commercial and Retail Receivers including the Pyrmont Bridge Hotel.
- Other Sensitive Receivers including the Maritime Museum.

The potentially affected receivers are shown in **Figure 56**.

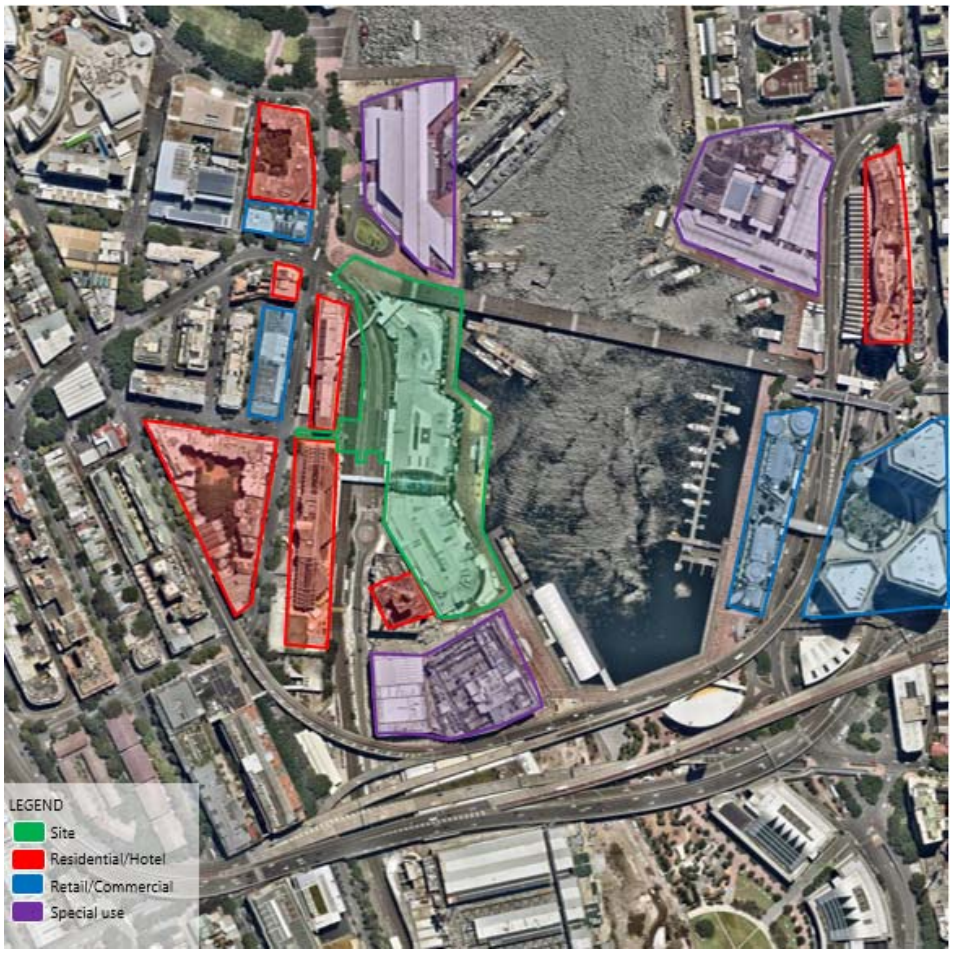


Figure 56 – Site and surrounding land use map in terms of noise sensitivity
Source: Renzo Tonin and Associates

Renzo Tonin & Associates note that additionally to the existin residential receivers above, the construction phase will also need to consider potential impacts upon less sensitive uses within the vicinity of the site. Consideration may need to be given to the ICC depending on the construction program.

The following potential acoustic and vibration impacts were identified in the report:

- operational noise generated by the development;
- noise intrusion from the existing environment on the development; and
- construction noise and vibration.

5.17.1 Operational Noise

The operational noise sources associated with the future development are considered to be:

- traffic generated by the development on the local road network and loading dock operations; and
- activity associated with restaurants, cafes and other retail uses, including patrons, music and loading docks.

The proposed residential tower would be likely to be the most noise sensitive component of the development with regard to noise intrusion.

Mitigation Measures

Renzo Tonin & Associates suggest that the future Stage 2 DA report should seek to identify strategies for noise control and management which may include physical design measures and management measures such as permissible hours of operation for various uses.

Noise to the internal areas of the residential tower can be readily mitigated through appropriate design of the detailed building in order to meet relevant Australian Standards.

5.17.2 Construction Management

The construction phase of the redevelopment will need to consider both noise and vibration impacts in accordance with the relevant NSW policies and guidelines. A preliminary Construction Environmental Management Plan forms part of the Stage 1 Concept Proposal SSD DA submission, but will be further developed for the Stage 2 DA(s) and supplemented by a further acoustic assessment.

Assessment for each primary phase of development is expected to be carried out, including demolition, excavation, structures and fit-out phases.

Mitigation Measures

The management of construction noise and vibration will include consideration of work methods, equipment selection, site arrangement, physical controls, monitoring programs and consultation.

5.18 Reflectivity

Reflectivity analysis will be undertaken for the detailed designs and submitted with the Stage 2 DA(s). It is anticipated that all facade glazing will have a normal specular reflectivity of visible light of 20% or less (as required) to avoid adverse glare to occupants of neighbouring buildings.

Such measures will ensure that the future buildings will not cause adverse solar glare to vehicle drivers or pedestrians in any of the surrounding areas or to the occupants of other surrounding sensitive uses.

5.19 Infrastructure and Utilities

Arcadis have undertaken consultation wherever possible with the relevant authorities and utility providers in order to determine the existing utilities and arrangements, forecast demand, and any required upgrade works to accommodate the Concept Proposal. The findings of these consultations are detailed in the Utilities Report prepared by Arcadis and included as **Appendix I**.

5.19.1 Sewer

A DBYD search indicated that there are existing sewer assets located directly within the Harbourside development boundary. The Harbourside development will be able to connect by gravity to the west and adjacent to the proposed development. There are four existing sewer manholes located along the sewer that will be likely to be suitable for future sewer connections.

Sydney Water have indicated that sewer mains in the locality have adequate capacity to accommodate the Concept Proposal, however sections of the existing infrastructure may need to be augmented to enable supply to the development. Some existing sewers located within the Harbourside development may also need to be relocated/protected.

5.19.2 Water

Sydney Water has indicated that the Site is located within the existing urban supply network. The intensification of the Site will result in increased demand; however, consultation with Sydney Water Corporation (SWC) has confirmed that the existing infrastructure has adequate capacity to accommodate the Concept Proposal.

New reticulation pipework will be required, and existing watermains may need to be augmented to enable supply to the development and some existing watermains may also need to be relocated/ protected in accordance with the SWC.

It is not expected that any existing Sydney Water assets in the vicinity of the Site will be adversely impacted on by the proposal.

5.19.3 Stormwater

Arcadis have assessed the adequacy of the existing stormwater network and how it will be protected during demolition and construction of the project.

There is a stormwater box culvert that passes below the existing Harbourside Shopping Centre footprint. The extent of the proposed building footprint located over the box culvert will be reduced relative to the existing conditions, which will be an improvement from the existing situation.

Arcardis consulted with SWC who confirmed that an easement has been requested as part of the ICC Hotel development for the potential diversion of this box culvert. The SWC outlined that the existing box culvert is in reasonable condition to allow it to remain in its current location for the present time, however the design of the building will need to ensure that the building loads are not supported by the culvert and the culvert is not affect in terms of structural integrity and function. In addition, a construction methodology will be developed to ensure excessive temporary construction loadings are no imposed on the existing culvert.

The SWC also confirmed in principle for the future build over of this box culvert as part of the redevelopment of Harbourside.

The stormwater strategy will be developed further prior to the lodgement of Stage 2 DA(s), and will be developed in consultation with the relevant authorities.

5.19.4 Electrical

The site is located within the Ausgrid service area. Mirvac has commenced negotiation for supply to the Site with Ausgrid. Ausgrid outlined that the proposed Site will require new substation infrastructure and more than likely a new feeder direct from a large scale network Augmentation.

The Site is anticipated to have a maximum demand of 11.0 Mega Volt Amp which will be serviced by the two existing substations and an additional new single surface chamber substation containing 3 x 1500kilo-Volt-Ampere transformers, associated High Voltage and Low Voltage switchgear. Connection of this substation is proposed either via new in-ground pit and pipe infrastructure from the new substation to the adjacent existing 11kV network in Darling Drive, or more than likely via new in-ground pit and pipe infrastructure to one of the nearby zone substations.

A connection application will be required to be submitted to Ausgrid to determine if the additional substation will require a connection to one of the nearby zone substations. This will be addressed as part of the future detailed design process.

5.19.5 Gas

Jemena own and operate the existing gas infrastructure in the vicinity of the Site. It is proposed that the connection of the Harbourside development will be made by way of regulator set and connection to the existing main to the west of the Site. Jemena have confirmed that this main may be able to supply gas to the Harbourside development, subject to commercial viability of the development. Jemena require more detailed hydraulic calculations to be provided during the detailed design stage to assist then with this request.

5.19.6 Telecommunications

NBN Co are afforded right of first refusal for public telecommunications wired connectivity. However, NBN Co has indicated that they plan to provide services to SICEEP project and therefore there will be NBN Co. telecommunications infrastructure in place in the vicinity of the site prior to construction of the Harbourside development. Therefore, the proposed development is expected to be catered for with regard to future telecommunications services.

5.19.7 RailCorp Infrastructure

The light rail corridor located in the western portion of the site contains infrastructure (e.g. electrical conduit) that may require relocation in order to accommodate the Concept Proposal.

Consideration of the demolition of the existing pedestrian bridge and the construction of the proposed pedestrian bridge linking the development with Bunn Street will also require consideration of RailCorp assets during the detailed design phase.

Potential impacts to the light rail corridor will be addressed as part of the relevant Stage 2 DA(s), and arrangements for suitable relocations will be made in consultation with RailCorp.

Arcadis met with RailCorp and Department of Transport on 10 February 2016 to discuss the Concept Proposal.

5.19.8 Saltwater In-take Channel

An existing salt-water in-take system and easement associated with this channel are located below the footprint of the existing Harbourside building. It is considered that this infrastructure does not provide any cooling benefit to any development and that this system is currently redundant.

Further consultation will be required during the next stages of the proposed development to determine if this system can be capped. The future detailed design will need to consider the location of this system.

5.20 Water Cycle Management

5.20.1 Flooding

A Flood, Stormwater and Water Sensitive Urban Design Report has been prepared by Arcadis Consulting (included at **Appendix V**).

In particular, the report:

- provides a drainage concept for the site which addresses the flooding and sea level rise risks on the site;
- identifies initial water sensitive urban design analysis and discussion of initiatives proposed to be adopted to achieve pollutant reduction targets

The report acknowledges that there are a number of large Sydney Water underground culvert systems that convey the Darling Harbour catchment runoff into Cockle Bay and these are influenced by tidal seas, which can reduce the discharge capacity of the stormwater conduits, resulting in increased flows and flooding above ground.

These influences have been taken into account in the City of Sydney 2014 flood study with the resulting Harbourside site flood levels. The City of Sydney flood study has been based on the existing site development and the associated site flood regimes but could be altered by re-development or by the local catchment. The average recurrence interval of the 100-year flood is predicted to have a water depth of 0.79m and water level of 3.26AHD.

Harbourside is located in the downstream of the catchment and has flood affection at some points on its perimeter. In a flood event runoff pools on the western side of the site, originating from Union Street/ Darling Drive and from local catchment inflows. On the east side of the site flooding is limited to shallow flow including under sea rise scenarios and predominantly discharges into Cockle Bay. Elevated sea levels do not directly flood the site.

The proposed flooding and stormwater management for the Harbourside development is expected to include the following:

- modifications to the existing trunk drainage and local stormwater systems;
- building over the existing Sydney Water culvert that conveys flows through the Harbourside site and discharges into Cockle Bay (this culvert passes below the existing Harbourside development, prior to discharging to Cockle Bay);
- demolition of existing stormwater infrastructure and inclusion of new drainage systems to accommodate the proposed Harbourside development, particularly in the southern area of the development where new external laneways are proposed;
- retention of existing neighbouring property stormwater connections, during construction and completion of the Harbourside redevelopment;
- re-use of existing drainage systems and connections where possible; and
- sediment and Erosion Control measures during construction.

Arcadis has reviewed the 'Darling Harbour Catchment Flood Study – Final Report' (23 October 2014) prepared by BMT WBM Pty Ltd for City of Sydney (CoS) and associated direct rainfall TUFLOW model developed by BMT WBM Pty Ltd for the CoS 2014 flood study.

Based on CoS flood study levels for the Harbourside Site, and the original re-development Concept Proposal presented to Arcadis, it is noted that:

- The proposal indicates minimum floor levels are proposed to be 3.5m AHD. While the maximum 1% AEP flood level adjacent to the buildings is 3.37m AHD. As such, minimum floor levels would be compliant with CoS requirements.
- The Harbourside access road and loading dock area would appear to have excessive inundation. Typically, expected minor system capacity would be 20 year, with inundation limited to 0.2m in a 100 year event. CoS flood levels indicate that for current conditions, inundation would be up to approximately 0.8m in a 100-year event. Inundation is for existing conditions and further investigations are recommended in the Stage 2 DA(s), to assess if flood conditions can be improved.
- The illustrative back of house and cold storage room areas will require flood mitigation measures up to the 100-year flood event, for any area located within the 100-year floodplain and below the 100-year (1% AEP) flood level, following determination of the 100-year floodplain in future detailed flood modelling.

5.20.2 Stormwater

Arcadis has prepared a drainage concept plan (included at **Appendix V**). This concept design proposes stormwater management that:

- includes building hydraulic and ground surface connections which discharge into the Sydney Water conduits. While these local drainage systems will be sized to convey up to 20 year ARI flows, their performance may be limited by the Sydney Water system capacities; and
- excludes on-site detention for the Harbourside development.

The stormwater management is subject to hydrological and hydraulic analysis of existing and proposed stormwater systems to determine capacities, overland flow regimes and works that may be necessary to mitigate potential adverse flood impacts, as a result of the Harbourside re-development. Such stormwater options may include the introduction of relief overland flow path(s) and system amplification(s). Also, should a new stormwater system be necessary on the eastern side of Harbourside, the discharge into Cockle will require approval.

Detailed Stormwater Drainage Plans for the redevelopment will be provided with the relevant future Stage 2 DA(s) and will demonstrate that the drainage system will be able to convey the necessary rainfall events.

5.20.3 Water Quality

The incorporation of appropriate Water Sensitive Urban Design measures will detailed within future Stage 2 DA(s). Potential measures to be incorporated include:

- rainwater tanks;
- stormwater reuse;
- green roofs; and
- water quality devices such as gross pollutant traps.

Future Stage 2 DA(s) will also include results from modelling of water quality to demonstrate how the proposal responds to relevant targets.

Stormwater quality during the future construction phase will be safeguarded through the implementation of measures detailed in the Erosion and Sediment Control Plan in **Appendix V**. Further details will be submitted with future Stage 2 DA(s).

5.21 Geotechnical Issues

The soil and geotechnical conditions of the Site are summarised in Section 2.3.5 of this EIS, and detailed in the Coffey Geotechnics Preliminary Geotechnical Assessment included at **Appendix G**.

Coffey Geotechnics have determined that the Concept Proposal is feasible from a geotechnical perspective, subject to the adoption of a number of recommendations addressing excavation, contingency planning, and seismic design.

Mitigation Measures

It has been recommended by Coffey Geotechnics that site specific investigations for the future structures are carried out and submitted with the future detailed application(s) for approval. These investigations and subsequent mitigation measures should adequately manage any potential geotechnical risk.

5.22 Contamination

A Preliminary Site Contamination Report has been prepared by Coffey and is included at **Appendix H**.

The results of the Preliminary Site Contamination Assessment indicate that the site historically comprised a tidal mudflat in 1860 prior to a period of land reclamation and development as part of a substantial rail and maritime freight facility. The Darling Harbour Goods Yard and associated Iron Wharf occupied the site until c.1980 when it was demolished as part of the wider regeneration of the Darling Harbour area. It is understood the Harbourside Shopping Centre opened in mid-1980s, and has remained substantially unchanged since that time.

The Preliminary Site Contamination Assessment identified the following areas of environmental concern at the Site:

- fill of unknown origin and quality;
- waste cooking oil AST situated within the north-western portion of the Site; and
- former Darling Harbour Goods Yard & associated Iron Wharf.

The conceptual site model presented identifies a number of plausible linkages between chemicals potentially associated with the areas of concern, and environmental and human receptors including dermal contact with soil/groundwater, ingestion of dust/groundwater, inhalation of dust, vapours and fires, seepage of groundwater into Cockle Bay and surface runoff/overland flow.

The assessment undertaken by Coffey determines that the Site can be made suitable for the proposed uses in accordance with Clause 7 of SEPP 55.

Mitigation Measures

In light of the identified areas of concern, it has been recommended by Coffey that further characterisation of the Site is carried out involving an intrusive field sampling programme and laboratory testing to characterise the nature and extent of potential contamination associated with the identified areas of concern.

The findings of the investigation should be used to further confirm the suitability of the Site for the actual land uses sought to be approved in detail as part of the future application(s) and inform the requirement for remedial and/or management measures to be incorporated into the future development.

Additional investigation should include an assessment for acid sulphate soils to develop an appropriate strategy to manage these should they be encountered during basement excavation. It is considered that the level of assessment undertaken at this stage is reflective of the current status of the project in the development process.

5.23 Construction Management

A Construction and Environment Management Plan (CEMP) has been prepared by Mirvac and is included at **Appendix N**. The report addresses the construction items related to the Concept Proposal and outlines the actions and staging of construction to mitigate concerns of surrounding stakeholders.

5.23.1 Traffic, Parking and Pedestrian Management (Construction)

A detailed Transport and Traffic Impact Assessment will need to be prepared to provide details relating to traffic, parking and pedestrian management during the demolition and construction phase of the development. More specifically, it will outline planned mitigation arrangements demonstrating how, during demolition and construction of the development, the pedestrian and vehicular movements will be addressed to minimise impact.

5.23.2 Construction Traffic

During works, the construction traffic routes and access points are expected to enter the site off a road via Darling Drive. The temporary construction access routes run adjacent to the light rail line and under Darling Drive. By implementing this access system, Darling Drive will remain open for the duration of the project. Exit points on each site will be manned by qualified Traffic Controllers.

Major entrance points will be manned to provide security and ensure the safe and efficient operation of vehicle movements into and out of the Site. A hoarding will be erected around the perimeter of the site.

On-site parking for construction workers will not be provided. The proponent will convey information on local public transport routes and public car parking stations to works.

All major deliveries will enter and exit the Site via Darling Drive. Signage will be installed within the Site to direct deliveries, pedestrians and vehicles. There will be several designated areas for deliveries and the loading/unloading of materials on the sites. Further details on all traffic management requirements will be outlined in the future detailed application(s).

Pedestrian access and movement around the Harbourside Site will be of high importance during all stages of construction. Detailed pedestrian routes will be identified and highlighted in the future stages. All pedestrian routes shall be clearly defined with signage and delineated from vehicular traffic routes where required. Pedestrian access to adjacent building and sites is expected to be maintained during construction.

5.23.3 Sediment and Erosion Control

Sediment and erosion controls will be provided in accordance with the principles and site actions identified in the CEMP. These controls will ensure that there are no unacceptable impacts on water quality and volumes within existing watercourses and stormwater drainage systems as a result of the proposed development. Further details will be outlined in the future detailed application(s).

5.23.4 Construction Waste Management Plan

A Waste Management Plan will be developed by a Waste Contractor for the removal of waste generated by construction works on the Site. Waste likely to be generated on the Site includes:

- General Waste
- Cardboard and White Pater
- Bottles Plastics, cans;
- Steel, concrete, bricks, tiles, timber

The waste subcontractor will supply the builder's waste bins for the onsite collection and storage of general waste material. It is required that the waste facility will recycle a minimum of 95% of the material brought to their recycling depot.

5.23.5 Noise and Vibration

The CEMP details noise and vibration management principles and measures which will be formalised in a detailed Noise and Vibration Management Plan prior to the issue of a Construction Certificate as recommended by the Environmental Noise and Vibration Impact Assessment. Further details will be outlined in the future detailed application(s).

5.23.6 Water Quality

During excavation, a wash down facility will be installed to wash the tyres and wheel arches of any trucks existing the excavation zone. A dewatering Management Plan will be established which will outline the requirements for dewatering and any water treatment that may be required. A Surface Water Quality Monitoring Program will be prepared and implemented to monitor impacts on surface water quality and resources during construction and operation. Further details will be outlined in the future detailed application(s).

5.23.7 Air Quality

An Air Quality Monitoring Program will be implemented prior to issue of a Construction Certificate to detail preventative measures to minimise the impact of construction activities, including dust emissions, and monitoring measures to ensure that air quality issues are promptly identified and addressed.

Stockpiling of excavated material shall be carried out in a manner to limit sediment migration and water runoff. Further details will be outlined in the future detailed application(s).

5.23.8 Hazardous Materials

A hazardous materials inspection survey and report shall be completed for all areas in the site boundary. Prior to commencement asbestos and dust monitoring devices will be established to adjacent property in locations agreed with the building owner.

During construction, the proponent will implement a hazardous materials register and maintain a dangerous goods register ad material safety data sheet for each product.

All relevant firefighting equipment, first air facilities and relevant authority contracts will be displayed clearly and included at site inductions. Further details will be outlined in the future detailed application(s).

5.23.9 Mitigation Measures

The following mitigation measures are to be implemented into the future detailed application(s):

- a Construction Traffic Management Plan is to be included in tender documents for all works;
- a Construction Traffic Management plan is to form part of site induction package;
- subcontractors / suppliers should submit formal delivery booking requests 48 hours prior to delivery;
- there should be the establishment of holding areas for urgent and emergency vehicles within the Site;
- strategic locations of construction zones are to be identified to eliminate double handling of materials delivered to the Site;
- controlled delivery of materials is necessary to maintain programme;
- nominated and controlled storage areas are to be identified within the development site hoardings;
- the prefabrication of materials off-site will assist in minimising storage requirements; and
- An Air Quality Management Plan and Air Quality Monitoring Program should be implemented prior to the implementation of works and should detail preventative and monitoring measures to minimise construction impacts on air quality

5.24 Socioeconomic and Cultural Issues

5.24.1 Economy and Employment

The Strategic Planning and Economic Benefits Analysis prepared by JBA outlines the proposed redevelopment's alliance with key strategic planning objectives as well as the positive economic benefits which will result from the development (refer to **Appendix Y**).

The NSW Government's number one priority is to restore economic growth and establish NSW as the first place in Australia to do business. The Harbourside redevelopment will significantly contribute to this priority, reinforcing Sydney's status as Australia's global city.

Overall 640 full-time equivalent construction jobs will be directly supported by the development of the proposal and substantial public domain improvements within Darling Harbour. A further 940 full-time equivalent jobs will be supported within the local and broader Australian economy during the construction phase as a result of flow-on multipliers. Cumulatively, the project will directly or in-directly support approximately 1,580 jobs over the construction phase.

The proposal will ultimately accommodate a permanent workforce of over 900 additional persons within the Site, and a permanent residential population of approximately 700 people. Collectively, the worker and resident population will inject approximately $16 million in annual spending into the local economy.

This expenditure will deliver substantial benefits to established local businesses within the Darling Harbour, Ultimo and CBD areas who will benefit from an increase in their local customer base, and support approximately 960 additional jobs in the local and regional economy.

Tourism spending is also significant in the Sydney and NSW economy. The Darling Harbour area already receives over 25 million visitors per annum and is one of the most visited and popular precincts of Sydney. The Harbourside redevelopment will play a key role in repairing the fabric of this precinct.

Overall, JBA has identified the following key economic and employment benefits of the project:

- Approximately **930 permanent jobs** to Darling Harbour, representing 290 jobs above that currently provided on site[2].
- Additional **640 direct construction jobs** and a further **940 jobs** delivered as a result of flow-on effects from the construction project[3].
- **$450+ million** construction expenditure, including end user fit-out and finishes.
- **$16.65+ million** injected into the local area per annum from ongoing workforce and resident expenditure.
- Proposed development is situated on a key site within Sydney's Cultural Ribbon, and is integral to establishing Sydney's as a world class tourist and business destination.
- Compliments and supports the significant government and private sector investments that has been made towards regenerating and improving the Darling Harbour Precinct and Sydney Harbour Foreshore.

5.24.2 Community Services and Facilities

The Harbourside development is also a major urban renewal project that will deliver significant benefits for the entire City.

Key benefits to the community include:

- Providing an enhanced, enlarged and dynamic public domain to be enjoyed by workers and visitors alike.
- Upgraded and improved event space through the event stairs which caters for diverse crowds, with shade covers and open space for maximum viewing. The public domain aims to be flexible whilst retaining amenity variation to suit the crowds.
- Provision of a community roof park – the landscape terrace offers opportunities to local residents to have access to waterfront views and public seating with a green setting.
- Providing improved permeability and better connections to surrounding areas (including overcoming existing poor east-west connections between Pyrmont and Darling Harbour).

[2] *Employment within the new Harbourside Shopping Centre based on existing work -space ratios (WSRs) developed by City of Sydney*

[3] *Construction industry jobs based on NSW Treasury Industry Sector Employment Multipliers initial effect multiplier*

- Creating a vibrant and activated precinct for Sydneysiders and visitors to enjoy, with a mix of retail shops, public spaces and dining areas with 52,000m^2 non residential GFA.
- Prioritising employment requests from suitably qualified and experienced applicants who are residents of the local community and surrounding areas.
- Increased safety and security in the surrounding public domain.

5.24.3 Cultural Impacts

The Concept Proposal will facilitate the development of the Harbourside in a manner that considers the various demographic and cultural groups that will form the existing and future community, whilst respecting the cultural heritage significance of the Site.

More specifically, it is envisaged that public art will be provided within the Harbourside site which may reflect heritage and cultural theme, and that a green edge will be installed adjacent to Cockle Bay as part of the public domain works, which will provide social infrastructure providing human comfort and the upgraded bridge interface which will celebrated the heritage character of Pyrmont Bridge.

It is also envisaged that a number of cultural programs such as Chinese New Year, Luminous, Tai Chi and a variety of other pop-up events may be accommodated within the Harbourside site. The proposed built environment will respond to facilitate and maximise the success of these events, through the provision of the event stairs which provides seating terrace for viewing of the large event space.

In summary, the indicative cultural initiatives envisaged for Harbourside have the potential to greatly increase the cultural significance of the locality and its wider vicinity, and are therefore considered to have a positive cultural impact.

5.25 Assessment of Airspace Approvability

An Assessment of Airspace Approvability Report has been prepared by Strategic Airspace and is included at **Appendix X**. The report addresses the assessment of aviation related height restrictions relevant to the redevelopment of the Site and provides a professional opinion on the approvability of the development envelope by aviation authorities in the event that a formal application is submitted under the Airports (Protection of Airspace) Regulations.

Strategic Airspace has noted that the proposed redevelopment will protrude above the Obstacle Limitation Surface (OLS), which is nominated at 156m on the Site. The OLS surface is used to identify buildings and other structures that may have an impact upon the safety or regularity of aircraft operations at an airport.

The other consideration are PANS-OPS surfaces. These surfaces represent the protection surfaces for published instrument flight procedures to and from the airport. The Concept Proposal will not interfere with any PANS-OPS surfaces.

Overall, Strategic Airspace has identified a maximum allowable height of 244m on the Site. As such, there is approximately 77m between the uppermost proposed height of the Concept Proposal and overall airspace control height limit to allow for cranes.

In light of this, Strategic Airspace believe that there is no technical impediment to approval of the development as currently proposed, and that an application under the Airports (Protection of Airspace) Regulations, supported by a full aeronautical assessment and safety case would be approved by the Department of Infrastructure and Regional Development.

5.26 Crime Prevention through Environmental Design

A key objective of the Harbourside redevelopment project is to create a 'welcoming and safe place'. The principles of Crime Prevention through Environmental Design (CPTED) are useful crime preventative tools in designing a safe built environment, and have been fully considered when designing the Concept Proposal.

A Crime Prevention through Environmental Design (CPTED) Report has been prepared by JBA as is provided at **Appendix N**. The CPTED Report assesses the Concept Proposal against the Safer-by-Design principles, as required by the SEARs.

Overall, it is considered that the proposed Concept Proposal will facilitate a mixed use development which will significantly improve the image of the site, and in turn will contribute to the provision of a safe and secure environment for future users.

The following key benefits are attributed to the proposal:

- it will increase the surveillance opportunities over the public domain areas, Darling Drive and the Darling Harbour precinct in general;
- it will provide the opportunity to ensure that suitable lighting, technical supervision and access control mechanisms can be integrated into the new development and rejuvenated public domain areas;
- it will provide strong ownership cues and provide the opportunity for an increase in vibrancy and natural community policing 24 hours a day;
- it will provide the opportunity for environmental improvements to the Site, and immediate locality, which in turn will increase the perception of the area as a high quality and safe environment; and
- it will enable future access control provisions to be effectively implemented to ensure the security of future building users/residents and visitors to the site.

Specific CPTED recommendations in relation to the design of the future development will be made at the detailed design stage, however, high level design recommendations that should be implemented in the final design include:

- Provision of separate entries to the residential, non-residential and car park uses.
- Installation of CCTV throughout all external and internal publicly accessible areas, with any CCTV cameras to be accompanied by well distributed and high quality lighting.
- Use of a 24 hour concierge or security for the residential lobby areas.
- Provide systems (i.e. key/ card controlled access and security shutters etc.) to control access to the different uses within the non-residential and residential uses outside of business hours.
- Provide access control mechanisms within the car park.

The Concept Proposal is supportable from a crime and safety perspective and importantly accords with the CPTED principles. It is recommended by JBA that a CPTED review of any detailed proposal is undertaken at the appropriate stage.

5.27 Environmental Sustainability

An Environmental Sustainability Design Report has been prepared by Cundall as is provided at **Appendix L**. Cundall has explored a range of sustainability strategies which will be implemented into the future detailed stage(s) of the proposal.

The following environmental certifications will be investigated for the project:

- 4-Star Green Star Design & As Built v1.1 for the residential component;
- 4-Star NABERS Energy for the shopping centre component; and
- 3-Star NABERS Water for the shopping centre component.

Cundall has identified the following strategies which will be considered in the design to achieve the above environmental certifications:

- selection of non-toxic finishes to improve Indoor Environmental Quality (IEQ);
- efficient fittings, fixtures and appliances to minimise water demand;
- use of recycled water to reduce mains water consumption;
- load reduction, passive design, energy-efficient building services and smart controls to reduce energy consumption;
- promotion of healthy and active living through design and education strategies, including recreational and end-of-trip facilities, design for pedestrians rather than cars, prominent placement of stairs and access to fresh food;
- enhanced commissioning and tuning practices to translate design intent into actual performance;
- environmental and waste management to ISO14001 standard during demolition and construction;
- incorporation of crime prevention through environmental design (CPTED);
- innovative marketing and education strategies to convey sustainability practices to wider audiences; and
- selective procurement to consider the supply chain impacts of materials used in construction in terms of environmental and social responsibility, and to reduce embodied carbon.

It is expected by Cundall that the initiatives outlined in the ESD Report demonstrate how the Harbourside development can incorporate best practice ESD initiatives into its design, construction and ongoing operation. Through a combination of energy, water and other strategies, the project is expected to exceed minimum requirements for sustainable development in Australia.

5.28 Ecologically Sustainable Development

Ecologically sustainable development requires the effective integration of economic and environmental considerations in decision-making processes. Ecologically sustainable development can be achieved through the implementation of the following principles and programs.

5.28.1 Precautionary principle

The precautionary principle is utilised when uncertainty exists about potential environmental impacts. It provides that if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation. The precautionary principle requires careful evaluation of potential environmental impacts in order to avoid, wherever practicable, serious or irreversible damage to the environment.

This EIS has not identified any serious threat of irreversible damage to the environment and therefore the precautionary principle is not relevant to the proposal.

5.28.2 Integration principle

The integration principle holds that decision-making processes should effectively integrate both long-term and short-term economic, environmental, social and equitable considerations. The design of the Concept Proposal has been developed to with due consideration the short and long term effects of economic, environmental and social impacts to Harbourside, Darling Harbour, and the wider region.

5.28.3 Intergenerational equity

Inter-generational equity is concerned with ensuring that the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations. The proposal has been designed to benefit both the existing and future generations by:

- maintaining heritage listed items for future generations to appreciate and enjoy;
- implementing safeguards and management measures to protect environmental values.
- facilitating job creation and the provision of employment in close proximity to public transport; and
- Improving the public domain and amenity surrounding Harbourside.

The proposal has integrated short and long-term social, financial and environmental considerations so that any foreseeable impacts are not left to be addressed by future generations. Issues with potential long term implications such as waste disposal would be avoided and/or minimised through construction planning and the application of safeguards and management measures described in this EIS and the appended technical reports.

5.28.4 Conservation of biological diversity and ecological integrity

The principle of biological diversity upholds that the conservation of biological diversity and ecological integrity should be a fundamental consideration.

The proposal would not have any significant effect on the biological diversity and ecological integrity of the study area.

5.28.5 Improved valuation, pricing and incentive mechanisms

The principles of improved valuation and pricing of environmental resources requires consideration of all environmental resources which may be affected by a proposal, including air, water, land and living things. Mitigation measures for avoiding, reusing, recycling and managing waste during construction and operation would be implemented to ensure resources are used responsibly in the first instance.

Additional measures will be implemented to ensure no environmental resources in the locality are adversely impacted during the construction or operational phases.

5.29 Public Benefits and Development Contributions

The proposed development will deliver long lasting and significant public benefits to Sydney and NSW, and therefore the burdening of the development with additional contributions undermines the objectives of supporting the development of the Darling Harbour area – an area of state significance. The Harbourside Site is specifically excluded from all City of Sydney S94 Contributions Plans as well as any contributions under S61 of the *City of Sydney Act 1988*.

The exclusion of the Harbourside site (and broader Darling Harbour Precinct) reflects that it has its own special planning regime that applies, and that the State Government has since the 1980s (originally as part of the State's Bicentennial Program) set out to promote and encourage a variety of tourist, educational, recreational, cultural and commercial facilities across Darling Harbour. There is therefore no formal mechanism to levy development across the Harbourside site.

Accordingly, there are no grounds for the imposition of development contributions in relation to the proposal.

The Concept Proposal, which forms the redevelopment of the existing Harbourside Shopping Centre, will delivery real and tangible benefits to the Darling Harbour precinct and beyond. The project is expected to deliver the following key benefits:

- Monetary agreement between the proponent and Property NSW (commercial-in-confidence) to reflect the lease provision to the proponent. This lease arrangement will enable the revitalisation and rejuvenation of the Site.
- Significant public domain upgrade works, including the revitalisation of the Darling Harbour ground plane public domain surrounding the existing Harbourside building and integrating with/completing the transformation of Darling Harbour associated with ICC Sydney.
- The provision of a new east-west connection in the form of a new pedestrian bridge to Bunn Street.
- The provision of an additional 352m^2 of public domain at the ground level of Darling Harbour.
- The opportunity for publicly accessible spaces within the new shopping centre (such as the event stairs, ribbon stairs and observation deck);
- Monetary contribution to be provided for an appropriate affordable housing fund.
- Enhancement of/improved appreciation of the heritage listed Pyrmont Bridge with the provision of greater building separation to the bridge and creation of new generous public domain linkages.

- Removal of the disused monorail infrastructure adjoining the Pyrmont Bridge.
- Additional viewing opportunities/spaces on the Site to appreciate Sydney/Darling Harbour and Pyrmont Bridge.
- Replacement of a tired, outdated shopping centre with a new world-class and internationally competitive shopping centre which will support the revitalisation of Darling Harbour.

5.30 Site Suitability

Having regard to the characteristics of the Site and its location, the Concept Proposal is considered suitable for the Site as it:

- will repair the urban fabric in a poorly connected area of Darling Harbour;
- will create a vibrant neighbourhood through the provision of a mix of complementary land uses and new and improved public spaces;
- is capable of being developed in a manner that will minimise impacts to the natural, historical, and environmental qualities of the Site;
- will result in only minor environmental impacts that can be appropriately managed and mitigated; and
- will facilitate the renewal of the Site with considerable benefits to the local community.

Conversely, the Site is considered suitable for the Concept Proposal in that:

- the location of the Site at the edge of the Sydney CBD and in the vicinity of existing transport, tourism and business infrastructure is considered to be the most appropriate location for a major new mixed use development;
- the site is disconnected from the urban grain of surrounding precincts (including Pyrmont) and is in need of urban renewal;
- it is capable of being appropriately serviced to accommodate future development;
- it has excellent access to a wide range of services and facilities that will support future occupants of Harbourside; and
- it is well served by public transport.

5.31 Public Interest

The Concept Proposal is considered to be in the public interest as it will:

- develop Harbourside into one of Sydney's most innovative retail, restaurant, entertainment, tourist and residential districts;
- upgrade existing shopping and food and beverage offerings to facilitate the renewal of the site and attract visitors to Darling Harbour;
- create approximately 640 new jobs during construction, with ongoing employment opportunities for over 930 people, being 290 more than currently on the Site;
- minimise urban sprawl and the costs to society associated with this inefficient form of growth;
- support Sydney's development as a compact and well-connected city;
- encourage sustainable travel behaviour by providing residential apartments close to public transport;
- providing opportunities to provide community uses for the benefit of surrounding residents;

- provide a quality visitor experience and establish the Harbourside Site as a distinctive destination within a revitalised precinct of the city;
- create new functional, vibrant and connected public open spaces;
- increase and improve connections with Pyrmont and the city; and
- repair the urban fabric of this part of the city restoring street grain and connectivity.

6.0 Environmental Risk Assessment

The Environmental Risk Assessment (ERA) establishes a residual risk by reviewing the significance of environmental impacts and the ability to manage those impacts. The ERA has been adapted from Australian Standard AS4369.1999 Risk Management and Environmental Risk Tools. In accordance with the SEARs, the ERA addresses the following significant risk issues:

- the adequacy of baseline data;
- the potential cumulative impacts arising from other developments in the vicinity of the Site; and
- measures to avoid, minimise, offset the predicted impacts where necessary involving the preparation of detailed contingency plans for managing any significant risk to the environment.

The adequacy of the baseline data is demonstrated through the range of detailed technical reports and supporting documentation appended to this EIS. Overall, Section 5.0 of the EIS and the appended technical reports and supporting documents provide a comprehensive and detailed assessment of the potential cumulative impacts arising from other developments in the vicinity of the Harbourside Site. This assessment has determined that there are no adverse environment, social or economic impacts which cannot be managed or mitigated.

Figure 57 indicates the significance of environmental impacts and assigns a value between 1 and 10 based on:

- the receiving environment;
- the level of understanding of the type and extent of impacts; and
- the likely community response to the environmental consequence of the project;

The manageability of environmental impact is assigned a value between 1 and 5 based on:

- the complexity of mitigation measures;
- the known level of performance of the safeguards proposed; and
- the opportunity for adaptive management.

The sum of the values assigned provides an indicative ranking of potential residual impacts after the mitigation measures are implemented.

Significance of impact	Manageability of impact				
	5 Complex	4 Substantial	3 Elementary	2 Standard	1 Simple
1 – Low	6 (Medium)	5 (Low/Medium)	4 (Low/Medium)	3 (Low)	2 (Low)
2 – Minor	7 (High/Medium)	6 (Medium)	5 (Low/Medium)	4 (Low/Medium)	3 (Low)
3 – Moderate	8 (High/Medium)	7 (High/Medium)	6 (Medium)	5 (Low/Medium)	4 (Low/Medium)
4 – High	9 (High)	8 (High/Medium)	7 (High/Medium)	6 (Medium)	5 (Low/Medium)
5 – Extreme	10 (High)	9 (High)	8 (High/Medium)	7 (High/Medium)	6 (Medium)

Figure 57 – Risk Assessment Matrix

Item	Phase	Potential Environmental Impact	Proposed Mitigation Measures and / or Comment	Risk Assessment		
				Significance of Impact	Manageability of Impact	Residual Impact
Key: C – Construction, O: Operation						
Visual and Views	O	▪ Visual impacts to surrounding residents and public places	▪ The proposal is supportable in regards to the balance between the protection of private views and the protection of public domain views.	3	3	6 Medium
Transport and Accessibility	C+O	▪ Increased traffic on local roads ▪ Increased parking on local roads	▪ Based on the existing intersection performance and the likely traffic to be generated from the proposed development, all key intersections will perform at an acceptable level of service during the peak periods. As such, no mitigation measures are required to manage the surrounding road network.	2	2	4 Low / medium
Non-Indigenous Heritage	C	▪ Impact on heritage items/Conservation areas ▪ Impact on heritage items in the vicinity, including the Pyrmont Bridge.	▪ The proposed development will not result in any material impact on the significance or value of adjoining Items of Heritage Significance or nearby Heritage Conservation Areas, and as a result, no further assessment or mitigation measures are considered necessary.	2	1	3 Low
Non-Indigenous Archaeology	C	▪ Impacts to archaeological items of significance.	▪ Should unexpected finds such as Aboriginal stone artefacts or shell middens be located during development, work should cease in the immediate vicinity of the find and the project archaeologist notified in accordance with an unexpected finds protocol established for the Site.	2	2	4 Low / medium
Noise and Vibration	C	▪ Increase in noise levels during construction activities ▪ Adverse noise impacts on proposed residential apartments	▪ The Stage 2 SSD DA report(s) should identify strategies for noise control and management, which may include physical design measures and management measures such as permissible hours of operation for the various uses.	3	2	5 Low / medium
Infrastructure and Utilities	O	▪ Adequate connection to infrastructure and utilities.	▪ The detailed design of the future development is to identify the final design and provision of infrastructure and utilities. This is to be	2	2	4 Low / medium

Item	Phase	Potential Environmental Impact	Proposed Mitigation Measures and / or Comment	Risk Assessment		
				Significance of Impact	Manageability of Impact	Residual Impact
			conducted in consultation with the relevant authorities and providers.			
Water Cycle Management	O	▪ Potential flooding and stormwater impacts	▪ The finished floor level should be maintained nominally at RL3.5 to be above the 100-year flood level. ▪ Provide rainwater tanks ▪ Provide green roofs ▪ Proprietary devices such as Gross Pollutant Traps	3	2	5 Low / medium
Reflectivity	O	▪ Adverse solar reflectivity glare to motorists and pedestrians	▪ Exterior façade elements used throughout the development are to limit light reflectivity to 20% or less in the future detailed buildings on the Site.	2	2	4 Low / medium
Geotechnical Issues	O	▪ Instability of future development	▪ Analysis of potential groundwater seepage below the basement perimeter wall, and measures which could be employed to reduce the magnitude of seepage inflows or to otherwise mitigate impacts. ▪ Assessment of excavation-induced ground movements as part of the future stage(s) of development.	2	2	4 Low / medium
Contamination	C+O	▪ Exposure of contamination or hazardous materials during construction and operation	▪ It is recommended that further characterisation of the site is carried out involving an intrusive field sampling programme and laboratory testing to characterise the nature and extent of potential contamination associated with the identified AECs. ▪ The findings of the investigation should be used to assess the suitability of the site for the actual land uses proposed and inform the requirement for remedial and/or management measures to be incorporated into the future development. ▪ It is recommended that additional investigation	3	3	6 Medium

Item	Phase	Potential Environmental Impact	Proposed Mitigation Measures and / or Comment	Risk Assessment		
				Significance of Impact	Manageability of Impact	Residual Impact
			include an assessment for acid sulphate spoils to develop an appropriate strategy to manage acid sulphate spoils encountered during excavation.			
Wind Impact	O	▪ Adverse wind environment	▪ Potential mitigation measures are to be further explored in the detailed design of the buildings on the Site.	3	2	5 Low / medium
Crime and Public Safety	O	▪ Anti-social intimidating behaviour.	▪ The recommendations of the CPTED Report are to be implemented into the future detailed design stage(s).	2	1	3 Low
Environmental and Construction Management	C	▪ Noise, dust, air quality and traffic impacts	▪ Works are to be carried out in accordance with the Construction Management Plan prepared at the relevant stage of the project.	3	2	5 Low / medium

7.0 Mitigation Measures

The collective measures required to mitigate the impacts associated with the proposed works are detailed in **Table 13** below. These measures have been derived from the previous assessment in Section 5.0 and those detailed in appended consultants' reports.

Table 13 – Mitigation Measures

Mitigation Measures
Wind The recommendations of the Wind Report prepared by Cermak Peterka Petersen (CPP) are to be implemented including: ▪ Additional amelioration measures may be required for specific locations where local wind speeds may be greater such as close to the corners of the tower, but this would be conducted during detailed design. ▪ Wind-tunnel testing would be required to quantify the wind advice provided herein and for specific amelioration.
Traffic The recommendations outlined in the Transport and Impact Impact Assessment prepared by Arcadis are to be employed including: ▪ The proposed pedestrian routes be enhanced through wayfinding and signage to facilitate connectivity in all directions. ▪ Interfacing with the improved external pedestrian network will enhance accessibility of Harbourside and further strengthen linkages with public transport. ▪ A travel plan framework should be developed to outline the following: – Existing transport services available in the local area; – Access to information on travel to the site; – Review of local pedestrian and cycle network; – Timescale for initiatives; and, – Details for future monitoring. ▪ During the construction stage, measures can also be put in place to encourage workers to travel by public transport, cycle and walking. These include, among others: – A site travel plan can be prepared and distributed to the construction team to ensure sufficient information is available for them to make judgement on their travel choice; – Temporary end-of-trip facilities (i.e. cycle parking, lockers etc.) can be made available; – Where feasible, shuttle service to a major public transport interchange can be provided at certain times during shift change especially during the early hours or late hours during the day; – Parking can also be restricted to discourage car drivers amongst the workers. – Preferential parking privileges can be given to carpooling or car share systems; and, – Forums prior to start of the construction works and follow-up meetings would assist in the exchange of information on issues that arise regarding travel to and from the worksite.
Noise The construction noise mitigation measures outlined in the Noise and Vibration Report prepared by Renzo are to be adopted during construction. ▪ The Stage 2 SSD DA report(s) will seek to identify the strategies for noise control and management, which may include physical design measures and management measures such as permissible hours of operation for the various uses.
Geotechnical The recommendations outlined in the Geotechnical Assessment prepared by Coffey Environments Australasia Pty LTD are to be implemented including the following: ▪ Review of geotechnical and groundwater constraints and excavation retention requirements following concept design of the proposed basement and any other proposed in-ground structures. ▪ Analysis of potential groundwater seepage below the basement perimeter wall, and measures which could be employed to reduce the magnitude of seepage inflows or to otherwise mitigate impacts. ▪ Assessment of excavation-induced ground movements.
Contamination The recommendations outlined in the Preliminary Site Contamination Assessment prepared by Coffey are to be implemented including the following:

Mitigation Measures

- It is recommended that further characterisation of the site is carried out involving an intrusive field sampling programme and laboratory testing to characterise the nature and extent of potential contamination associated with the identified AECs.
- The findings of the investigation should be used to assess the suitability of the site for the actual land uses proposed and inform the requirement for remedial and/or management measures to be incorporated into the future development.
- It is recommended that additional investigation include an assessment for acid sulphate spoils to develop an appropriate strategy to manage acid sulphate spoils encountered during excavation.

Water Cycle Management, Flooding and Stormwater

It is recommended that the finished floor level within Harbourside Shopping Centre is maintained nominally at RL3.5 to be above the 100-year flood level and compliant with City of Sydney requirements.

Water Quality

- To appropriately manage and mitigate stormwater runoff on the Site and achieve the established water quality targets, Arcadis have recommended the following measures:
  - Provide rainwater tanks;
  - Provide green roofs
  - Proprietary devices such as Gross Pollutant Traps

Access

The recommendations of the Accessibility Report prepared by Morris Goding are to be incorporated into the detailed design.

- In order to ensure equal access is provided throughout the proposed development, the detailed design of the proposal will need to ensure compliance with the relevant accessibility provisions of the BCA.

Ecologically Sustainable Development

The following measures will be incorporated into the building design to maximise its environmental performance and energy efficiency:

- The ESD measures outlined in the Ecologically Sustainable Design Report prepared by Cundall are to be incorporated into the building design to maximise the environmental performance and energy efficiency of the building.

Construction Management

A Construction Management Plan (CMP) will be finalised and agreed to with the RMS prior to the release of the Construction Certificate following subsequent DAs.

Heritage

Heritage recommendations are to be implemented in accordance with the Heritage Impact Assessment prepared by Curio Projects.

Non-Indigenous Heritage

Recommendations are to be implemented in accordance with the Heritage Impact Assessment prepared by Curio Projects including:

- Should unexpected finds such as Aboriginal stone artefacts or shell middens be located during development, work should cease in the immediate vicinity of the find and the project archaeologist notified in accordance with an unexpected finds protocol established for the site.

Archaeological Impact

Recommendations are to be implemented in accordance with the Historical Archaeological Assessment prepared by Curio Projects including:

- Any impacts to archaeological relics of local or State significance associated with the redevelopment of the Harbourside Shopping Centre site should be managed in accordance with NSW Heritage Division guidelines to ensure historical archaeological best practice is adhered to.
- Once the impacts on the potential archaeological research are finalised, an Archaeological Research Design for the site should be prepared.
- Analysis of additional site information including geotechnical data, when available, and service plans should be undertaken to refine the understanding of archaeological potential presented in this report.

Mitigation Measures

Utilities

- In light of the location of existing utilities infrastructure over the site and the nature of the proposed development, Arcadis has concluded that Mirvac will be required to continue to consult with and obtain the necessary approvals from the relevant authorities and utility providers regarding the proposed Harbourside development.

CPTED

- Provision of separate entries to the residential, non-residential and car park uses.
- Installation of CCTV throughout all external and internal publicly accessible areas, with any CCTV cameras to be accompanied by well distributed and high quality lighting.
- Use of a 24 hour concierge or security for the residential lobby areas.
- Provide systems (i.e. key/ card controlled access and security shutters etc.) to control access to the different uses within the non-residential and residential uses outside of business hours.
- Provide access control mechanisms within the car park.

Reflectivity

- Reflectivity analysis should be undertaken for the detailed designs and submitted with the Stage 2 DA(s).

8.0 Conclusion and Justification of the Proposal

This EIS has been prepared to assess the environmental, social and economic impacts of the proposed Stage 1 Concept Proposal for the Harbourside Site. The EIS has addressed the issues outlined in the SEARs (**Appendix B**) and accords with Schedule 2 of the *Environmental Planning and Assessment Regulation 2000* with regards to consideration of relevant environmental planning instruments, built form, social and environmental impacts including traffic, noise, construction impacts and stormwater.

It is considered the project warrants approval for the following reasons:

- the Concept Proposal is permissible with consent and meets the requirements of the relevant statutory planning controls;
- the proposal is consistent with the principles of ecological sustainable development as defined by Schedule 2(7)(4) of the *Environmental Planning and Assessment Regulation 2000*;
- the area and shape of the site allows for the provision of the proposed Concept Proposal whilst not resulting in any unacceptable adverse impacts on surrounding buildings and uses;
- a balanced built form outcome has been achieved in the Concept Proposal, with the proposal fitting with the current and future built form framework of Darling Harbour, significantly contributing to the changing skyline of Sydney and ensuring a wall of buildings is not created on the western boundary of Darling Harbour;
- the mixture of uses proposed will complement the current and future uses of Darling Harbour, contributing to the revitalisation of the precinct as a lively and world-class destination;
- world class high quality retail and entertainment offering catering for local and tourist markets will be delivered on the Site through the proposal, contributing to the entertainment and retailing experience of Darling Harbour;
- quality residential apartments with high levels of amenity will be delivered through the proposal, contributing to the provision of housing close to employment opportunities, facilities and services;
- the proposed development will provide a significant public benefit through the provision of a renewed public domain, providing a regularised waterfront experience which stitches in with recent enhancements to the public domain located to the south of the Site;
- an additional 352m^2 of public domain to be delivered at the ground level of Darling Harbour;
- a new east-west pedestrian connection will be delivered through the Concept Proposal which better links Pyrmont and Darling Harbour;
- opportunities will be provided for more activated ground level public domain spaces and greater opportunities for event spaces in the public domain, contributing to the entertainment and tourism values of Darling harbour;
- a number of benefits will be delivered to the Pyrmont Bridge, including greater building separation, the removal of disused monorail infrastructure, make-good works and additional viewing opportunities from publicly accessible areas;
- the proposal will provide for additional surveillance opportunities with the delivery of the future buildings and overall improvements to the Site, in turn increasing the perception of the area as a high quality and safe environment;

- the site is adequately serviced with potable water and stormwater infrastructure and electrical and communication services;
- the project has been informed by extensive pre-lodgement community consultation, with feedback from this consultation shaping the end outcome of the Concept Proposal; and
- the provision of a vibrant retail and residential mixed use precinct will further support and strengthen the vitality of Darling Harbour on the world stage.

Given the planning merits described above, and the significant public benefits associated with the proposed development, it is recommended that this application be approved.